DISCLAIMER

The information contained in Victoria University’s 2008 Faculty of Health, Engineering and Science Handbook was current at 31 August 2007.

In today’s university environment, changes to courses occur far more frequently than in the past. For current information on Victoria University’s courses, readers are advised to access the University’s online courses database at www.vu.edu.au/courses.

If you have difficulty in accessing this material electronically, please phone (03) 9919 6100 for assistance.

IMPORTANT INFORMATION

The course details in this handbook (plus details of all other Victoria University courses) can also be searched on the University’s online courses database at www.vu.edu.au/courses.

This handbook can be downloaded as a pdf file from the Victoria University website at www.vu.edu.au/courses/handbooks.
HOW TO USE THIS HANDBOOK

Victoria University’s 2008 Faculty of Health, Engineering and Science Handbook is designed to provide students with detailed information on course structures and subject details for undergraduate and postgraduate courses offered by the faculty in 2008.

NOTE: Courses available to International students are marked with the (I) symbol.

The definition of fields used in course tables throughout this handbook include:

Credit Point – the number of credit points a subject contributes towards the total points needed to complete a course.

EFTSL – Equivalent Full-Time Student Load is a measure of the study load for one year for a student undertaking a course on a full-time basis.

SC Band – all Commonwealth supported courses fall within one of four bands of disciplinary areas. These bands are called student contribution bands and are used to determine the maximum student contribution amount, for both commencing and continuing students.

Pre 2005 (AU$) – cost of the unit of study for students who began their course of study before 1 January 2005 under the Higher Education Contribution Scheme (HECS) or Postgraduate Education Loan Scheme (PELS) arrangements.

From 2005 (AU$) – cost of the unit of study for all Commonwealth Supported students who commenced a new course of study on or after 1 January 2005.

Full Fee (AU$) – cost of the unit of study for students who do not hold a Commonwealth Supported place.

PLEASE NOTE

This handbook provides a guide to courses available within Victoria University’s Faculty of Health, Engineering and Science in 2008. Although all attempts have been made to make the information as accurate as possible, students should check with the faculty that the information is accurate when planning their courses.

This handbook includes descriptions of courses that may later be altered or include courses that may not be offered due to unforeseen circumstances, such as insufficient enrolments or changes in teaching personnel. The fact that details of a course are included in this handbook can in no way be taken as creating an obligation on the part of the University to teach it in any given year or in the manner described. The University reserves the right to discontinue or vary courses at any time without notice.

OTHER INFORMATION

Information about articulation and credit transfer, recognition of prior learning, admission and enrolment procedures, examinations, and services available to students can be accessed on the University’s website or by contacting the University directly.
2008 COURSES

Note: Courses available to International students include the symbol (I).

School of Architectural, Civil and Mechanical Engineering
Bachelor of Engineering in Architectural Engineering (I) 7
Bachelor of Engineering in Building Engineering (I) 9
Bachelor of Engineering in Civil Engineering (I) 11
Bachelor of Engineering in Mechanical Engineering (I) 13
Bachelor of Technology in Building Surveying 14
Graduate Diploma in Project Management 16
Graduate Diploma in Project Management 16
Master of Engineering in Mechanical Engineering (Coursework) (I) 17
Master of Applied Project Management 18
Master of Engineering (Project Management) (I) 19
Master of Project Management (I) 20
Graduate Certificate in Project Management 22
Graduate Certificate in Project Management 23
Subjects 24

School of Biomedical Sciences
Bachelor of Science in Biomedical Sciences (I) 51
Bachelor of Science in Ecology and Sustainability 52
Bachelor of Science in Nutritional Therapy 55
Bachelor of Science in Occupational Health and Safety 55
Bachelor of Science (Honours) Applied Biology I (I) 56
Bachelor of Science (Honours) in Biomedical Sciences (I) 57
Subjects 58

School of Computer Science and Mathematics
Bachelor of Science in Computer Science and Aviation (I) 83
Bachelor of Science in Computational Financial Mathematics 84
Bachelor of Science in Computer and Mathematical Sciences (I) 85
Bachelor of Science in Computer Science (I) 86
Bachelor of Science in Internet Technologies and Applications (I) 88
Bachelor of Science in Information Technology (I) 89
Bachelor of Science in Logistics Analysis (I) 90
Graduate Diploma in Computer and Mathematical Sciences 91
Graduate Diploma in Computer Science 91
Graduate Diploma in Multimedia Information Networking 92
Graduate Diploma in Software Engineering 92
Bachelor of Science (Honours) in Computer Science (I) 93
Bachelor of Science (Honours) Computer Science and Mathematics (I) 93
Master of Science in Computer and Mathematical Sciences (I) 93
Master of Science in Computer Science (I) 94
Master of Science in Logistics Systems and Support (I) 95
Master of Science in Software Engineering (I) 95
Master of Science (Research) (I) 96
Subjects 97

School of Electrical Engineering
Bachelor of Engineering in Electrical and Electronic Engineering (I) 115
Bachelor of Engineering Science in Electrical and Electronic Engineering (I) 116
Bachelor of Engineering in Robotic Engineering 117
Graduate Diploma in Microelectronic Engineering 118
Graduate Diploma in Systems and Control Engineering 119
Graduate Diploma in Telecommunication Engineering 120
Master of Engineering Science in Computer & Microelectronic Engineering (Coursework) (I) 120
Master of Engineering in Electrical and Electronic Engineering (I) 121
Master of Engineering in Microelectronic Engineering/Master of Engineering Science in Computer and Microelectronic Engineering (FOR CONTINUING STUDENTS ONLY) 123
Master of Engineering in Microelectronic Engineering (I) 124
Master of Engineering in Systems and Control Engineering 124
Master of Engineering Science (Telecommunication Engineering) (I) 125
Master of Engineering in Telecommunication Engineering (I) 125
Masters (by Research) 126
Graduate Certificate in Microelectronic Engineering 127
Graduate Certificate in Systems and Control Engineering 127
Graduate Certificate in Telecommunication Engineering 128
Bachelor of Science (Honours) – Physics 129
Subjects 130

School of Health Sciences
Associate Degree in Dermal Therapies 157
Bachelor of Chinese Medicine (Acupuncture and Herbs) 157
Bachelor of Health Science – Clinical Dermal Therapies 158
Bachelor of Science – Clinical Sciences 159
Bachelor of Health Science – Paramedic (ONE-year Conversion) 160
Bachelor of Health Science (Paramedic) 161
Bachelor of Health Science (Dermal Therapies) (I) 162
Graduate Diploma in Dermal Therapies 163
Graduate Diploma in Emergency Management 163
Bachelor of Health Science (Honours) (I) 163
Master of Health Science (by Minor Thesis) (I) 164
Master of Health Science – Osteopathy (I) 164
Master of Health Science (by Research) 165
Bachelor of Health Science – Paramedic (three-year Pre-service) 166
Subjects 168

School of Molecular Sciences 245
Bachelor of Science in Biotechnology (I) 245
Bachelor of Applied Science in Chemistry 245
Bachelor of Science in Medical, Forensic and Analytical Chemistry 246
Bachelor of Science in Nutrition, Food and Health Science 247
Graduate Diploma in Biotechnology 248
Graduate Diploma in Environmental Management 249
Graduate Diploma in Food Science (Exit point for the Master of Science in Food Science(SMFO)) 249
Bachelor of Science (Honours) Biology (Biotechnology) 250
Bachelor of Science (Honours) in Chemical Sciences 250
Bachelor of Science (Honours) (Nutrition and Food Sciences) 251
Master of Science – Biotechnology (Biotechnology and Bioinformatics Streams) 251
Master of Science in Environmental Management 252
Master of Science (Food Science) (I) 252
Subjects 254

School of Nursing and Midwifery 275
Bachelor of Nursing (Division 2 Entry) (I) 275
Bachelor of Nursing (Graduate Entry) (I) 276
Bachelor of Nursing (Graduate Entry) 277
Bachelor of Nursing (Pre-Registration) (Mental Health Major) 278
Bachelor of Midwifery 278
Bachelor of Midwifery 279
Bachelor of Nursing (Pre-Registration) 280
Bachelor of Nursing (Pre-Registration) 281
Bachelor of Nursing (Division 2 Entry) 282
Bachelor of Health Science (Honours) – Nursing (I) 282
Bachelor of Health Science (Honours) – Nursing 283
Master of Nursing 283
Master of Nursing (by Research) 284
Subjects 286

Centre for Environmental Safety and Risk Engineering 343
Graduate Diploma in Building Fire Safety and Risk Engineering 343
Master of Engineering in Building Fire Safety and Risk Engineering (Coursework) 343
Graduate Certificate in Performance-Based Building and Fire Codes 344
Subjects 345

Office Health, Engineering and Science 349
Bachelor of Engineering/Bachelor of Laws 349
Bachelor of Engineering/Bachelor of Arts 350
Bachelor of Engineering/Bachelor of Business E Commerce 350
Bachelor of Engineering/Bachelor of Science 351
Master's Qualifying Program 351
Master of Engineering and Science, and Doctor of Engineering Science 351
Doctor of Philosophy 352
Bachelor of Science/Bachelor of Psychology 353
Subjects 356

Packaging and Polymer Research Unit 365
Master of Engineering Science in Packaging (Coursework) 365
Subjects 366

Continuing Education 369
Non Award Short Course Pre-Registration Course for Overseas Qualified and Re-Entry Nurses 369
Bridging Course (Division 2 Nurses) 369
Certificate in Foundation Studies (Engineering and Science) 369
SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING

Below are details of courses offered by the School of Architectural, Civil and Mechanical Engineering in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to International students are marked with the (I) symbol.

BACHELOR OF ENGINEERING IN ARCHITECTURAL ENGINEERING (I)
Course Code: EBAE

Course Objectives
The course is designed to develop vocational skills for the engineering planning, design, construction, maintenance and management of building environmental and life safety systems.

The basic objectives of the course are to produce graduates who:
• have a solid foundation of scientific, engineering and project management knowledge capped by specific theoretical and practical exposure to the design of building environmental and life safety systems;
• have the ability to communicate effectively, both orally and in writing, and work well in a team situation;
• have an understanding of community need for building infrastructure in the context of societal aspirations and expectations;
• are motivated to continually improve their knowledge base; and
• are immediately productive upon completion of the course and are thus attractive to prospective employers.

The first two years of the degree program involves engineering fundamentals to provide a solid foundation for the applied engineering subjects in the following years of the course. Studies in architecture design practices and architectural history are developed in second and third year. These fundamentals provide students with the basis of understanding all developments in the profession of Architectural Engineering and Engineering in general as technology continually changes and the profession undergoes continual adjustment.

The applied engineering subjects building structures, building environmental and life safety systems, and building project management are introduced. In the final two years of the program, students undertake a major in either environmental systems design or structural systems design. An optional integrated 12 weeks industry placement period is available in Architectural Engineering at the end of the third year of the course in a ‘summer semester’ subject.

Architectural Engineering graduates will have enhanced skills for careers in:
• advanced environmental services system design;
• building renovation and refurbishment;
• building structures design;
• computer aided design and drawing;
• construction planning, management and project supervision;
• cost estimating and project feasibility;
• building energy audits and conservation studies;
• engineering consultation and investigations;
• facilities management and programming;
• interior lighting design;
• risk assessment for building system performance;
• support for preservation Architecture; and
• simulation of building environmental system performance.

Professional Recognition The Bachelor of Engineering in Architectural Engineering will be submitted for recognition by the Building Practitioners Board and Building Control Commission in Victoria. This submission is to meet the minimum academic qualification for registration as a Mechanical or Electrical Engineer, or as a Civil Engineer (Structures) as defined by the responsibilities of these categories of ‘Engineer’ in the Victorian Building Control Act. The degree satisfies the requirements for accreditation by The Institution of Engineers, Australia and will be submitted for accreditation by the Australian Institute of Building.

Overseas Exchange Program
Each year two students from Victoria University who are enrolled in either Architectural or Building Engineering, are able to undertake studies with full credit for one semester in the third year of the Architectural Engineering degree program at the University of Nebraska – Omaha (UNO), U.S.A. University scholarships are available to assist students in undertaking this exchange. The program at UNO is one of the newest and best resourced Architectural Engineering degrees in the U.S.A., having commenced in 1999 within new propose built buildings and facilities.

Admission Requirements
The prerequisite subjects for admission into the first year of the course are based on entry at post Year 12, Victorian Certificate of Education, or equivalent level, and are as follows:

Articulation from Associate Diploma or Diploma courses in Building Construction and Design or Engineering. Credit will be given to subjects passed to a sufficient level of competency.

Persons transferring from other courses or having overseas or other entrance qualifications of at least equivalent standard to those listed above, should apply for admission in the normal manner.

Full-feepaying international students must have qualifications which are equivalent to those listed above. In addition, they must provide evidence of proficiency in the English language:
• IELTS – an overall band score of 6+, subject to individual profile; or
• TOEFL – a score of 550+, and a Test of Written English score of 5+.

Course Duration
The course is offered over four years on a full-time basis of 22 contact hours per week. Part-time study may be approved. The course however cannot be completed solely on a part-time basis.
### Course Structure

Engineering subject codes commence with ‘V’. Science subject codes commence with ‘R’.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course Code</th>
<th>Subject</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Credit Point</td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>1</td>
<td>Semester One</td>
<td>REP1001</td>
<td>ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RMA1001</td>
<td>ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN1011</td>
<td>EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN1051</td>
<td>ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>1</td>
<td>Semester Two</td>
<td>REP1003</td>
<td>ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RMA1002</td>
<td>ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN1022</td>
<td>SOLID MECHANICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>2</td>
<td>Semester One</td>
<td>VAA2031</td>
<td>ARCHITECTURAL HISTORY &amp; DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN2021</td>
<td>SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN2041</td>
<td>THERMOFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN2061</td>
<td>ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>2</td>
<td>Semester Two</td>
<td>VAC2022</td>
<td>BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAC2042</td>
<td>HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN2032</td>
<td>ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>3</td>
<td>Semester One</td>
<td>VAA3001</td>
<td>ELECTRICAL POWER SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3031</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3071</td>
<td>HVAC SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3081</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>3</td>
<td>Semester Two</td>
<td>VAN3052</td>
<td>ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3032</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3042</td>
<td>HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA3072</td>
<td>HVAC SYSTEMS</td>
<td>2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>4</td>
<td>Semester One</td>
<td>VAA4001</td>
<td>ARCHITECTURAL LIGHTING AND COMMUNICATIONS SYSTEMS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4051</td>
<td>BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4071</td>
<td>HVAC SYSTEMS 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN4011</td>
<td>ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN4051</td>
<td>ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>4</td>
<td>Semester Two</td>
<td>VAA4032</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4042</td>
<td>BUILDING FIRE SAFETY SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4082</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4092</td>
<td>BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN4012</td>
<td>ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN4051</td>
<td>ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4091</td>
<td>STRUCTURAL DYNAMICS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4042</td>
<td>BUILDING FIRE SAFETY SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4082</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4092</td>
<td>BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAA4022</td>
<td>STRUCTURAL ENGINEERING ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VAN4012</td>
<td>ENGINEERING PROJECT</td>
<td>2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
</tbody>
</table>
Other Course Specific Notes
Assessment in subjects is designed to monitor a student's progress and achievements as well as contribute to and enhance their learning. Normally a prescribed range of assessment methods is employed in any subject. Assessment is by a combination of written assignments, tests, laboratory work and examinations. Supplementary assessment is not normally available in any subject except at the discretion of the Head of School in exceptional circumstances. Special Consideration in assessment may be granted on the grounds defined by the University Statutes. Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers. Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been made.

Degree with Honours
A Degree with Honours Program is offered concurrently with the fourth year of the ordinary Bachelor of Engineering program. Normally, students entering the final year of a full-time Bachelor of Engineering program (or its equivalent in part-time mode), will be offered honours candidacy, if they have achieved a minimum hour weighted average of 60 per cent over year levels 1 to 3, have not repeated a subject throughout levels 1 to 3 and have not been granted more than one year completion by compensation throughout the duration of the course. Fourth year honours degree gradings will be determined by the relevant Examiners Board on the basis of the hour weighted average for year level 4.

Industrial Experience
Students are required to undertake a 12 week industrial work experience period during their course. At the end of third year, students will have to undertake a 12 week (minimum) integrated industry placement program. It is intended that this program will meet the 12 week industrial work experience requirements imposed upon all accredited Engineering degree courses by Engineers Australia.

BACHELOR OF ENGINEERING IN BUILDING ENGINEERING (I)
Course Code: EBCB

Course Objectives
The course is designed to develop vocational skills for the engineering planning, design, construction, maintenance and management of buildings and building services systems. The basic objectives of the course are to produce graduates who:
- have a solid foundation of scientific, engineering and project management knowledge capped by specific theoretical and practical exposure to either the design of building structures or building services systems;
- have the ability to communicate effectively, both orally in writing, and work well in a team situation;
- have an understanding of community need for building infrastructure in the context of societal aspirations and expectations;
- are motivated to continually improve their knowledge base; and
- are immediately productive upon completion of the course and are thus attractive to prospective employers.

The course recognises societal needs for professional Engineers who have sound technical knowledge and good communication skills and capable of providing appropriate building infrastructure that is affordable, safe and comfortable to live and work within. The course is founded on a broad base of science and engineering fundamentals in the first and second year, with emphasis then given in the third and fourth years to applied discipline-specific topics, design and project work. The three study areas commence in the second and third years of the course and are building structures, building services and building construction and project management. In the final year, the focus for the course becomes planning and project management of the building construction process. Strong emphasis is given to professionalism, ethics and community responsibility. Local examples of building projects provide experiential learning through site visits together with teaching input from practicing Engineers and other professionals in industry. These provide valuable ‘real-world’ case studies and are a motivational asset to the course.

Professional Recognition
The degree satisfies the requirements for accreditation by Engineers Australia and will be submitted for accreditation by the Australian Institute of Building.

Overseas Exchange Program
Each year two students from Victoria University who are enrolled in either Architectural or Building Engineering, are able to undertake studies with full credit for one semester in the third year of the Architectural Engineering degree program at the University of Nebraska-Omaha (UNO), U.S.A. University scholarships are available to assist students in undertaking this exchange. The program at UNO is one of the newest and best resourced Architectural Engineering degrees in the U.S.A., having commenced in 1999 within new purpose-built buildings and facilities.

Admission Requirements
The prerequisite subjects for admission into the first year of the course are based on entry at post Year 12, Victorian Certificate of Education, or Admission Requirements
The prerequisite subjects for admission into the first year of the course are based on entry at post Year 12, Victorian Certificate of Education, or equivalent level, and are as follows:
- Persons transferring from other courses or having overseas or at least equivalent standard to those listed above, should apply for admission in the normal manner.
- Full-fee paying international students must have qualifications which are equivalent to those listed above. In addition, they must provide evidence of proficiency in the English language:
  - IELTS – an overall band score of 6+, subject to individual profile; or
  - TOEFL – a score of 550+, and a Test of Written English score of 5+.

Course Duration
The course is offered over four years on a full-time basis. Part-time study may be approved. However, the course cannot be completed solely on a part-time basis. Students must complete 384 credit points.

Course Structure
Engineering subject codes commence with "V".
Science subject codes commence with "R".

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VAN1051 ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>Semester Two</td>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Points</td>
<td>EFTSL</td>
<td>SC Band</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td>--------------</td>
<td>---------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>REP1003</td>
<td>ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>RMA1002</td>
<td>ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN1022</td>
<td>SOLID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN1032</td>
<td>INTRODUCTION TO DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA2031</td>
<td>ARCHITECTURAL HISTORY &amp; DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN2021</td>
<td>SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN2041</td>
<td>THERMOFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN2061</td>
<td>ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA2002</td>
<td>ELECTRICAL POWER SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAC2042</td>
<td>HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAC2022</td>
<td>BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN2032</td>
<td>ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>SERVICES STREAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA3001</td>
<td>ELECTRICAL POWER SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3031</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3071</td>
<td>HVAC SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3081</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAC3021</td>
<td>STRUCTURAL ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3031</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAC3061</td>
<td>GEOMECHANICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3042</td>
<td>HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3032</td>
<td>ENVIRONMENTALLY SUSTAINABLE DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA3072</td>
<td>HVAC SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>SERVICES STREAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA4051</td>
<td>BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA4071</td>
<td>HVAC SYSTEMS 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN4051</td>
<td>ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>Or #</td>
<td>VCP5726</td>
<td>PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5705</td>
<td>PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN4011</td>
<td>ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>SERVICES STREAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA4082</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAA4092</td>
<td>BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5716</td>
<td>PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5736</td>
<td>FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN4012</td>
<td>ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>STRUCTURES STREAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA4051</td>
<td>BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5726</td>
<td>PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5705</td>
<td>PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VAN4091</td>
<td>STRUCTURAL ENGINEERING DESIGN 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td>Or #</td>
<td>VAN4011</td>
<td>ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>SERVICES STREAM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAA4082</td>
<td>BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5716</td>
<td>PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>VCP5736</td>
<td>FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
</tr>
<tr>
<td>Other Course Specific Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment in subjects is designed to monitor a student's progress and achievements as well as contribute to and enhance their learning. Normally a prescribed range of assessment methods is employed in any subject. Assessment is by a combination of written assignments, tests, laboratory work and examinations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The course is offered over four years on a full-time basis. Part-time study may be approved. However the course cannot be completed solely on a part-time basis. Students must complete 384 credit points.

**Course Structure**

The course is founded on a solid base of science and engineering fundamentals in the first two years, with emphasis then being given in years three and four to applied discipline-specific topics, design and project work. Substantial emphasis is given in a range of subjects to professionalism, ethics and community responsibility, team assignments, broad problem solving and communication skills, and the concepts of sustainability and sustainable engineering practices. A focus on local engineering examples, experiential learning and site visits, together with significant input from external industry-based lecturers, provides students with exposure to real world problems and is considered a motivational cornerstone of the course.

There are two major streams in structural and water engineering running through the course, complemented by minor streams in geomechanics and environmental engineering. The course philosophy is very much based on a recognition of society's need for well-rounded engineers who not only have sound technical and communication skills but also a good understanding of the environmental, economic, social and political environment in which they must operate.

Transportation engineering. Environmental and management issues are covered in specific subjects but also more broadly by integration into a range of other subjects throughout the course. Subject streams are generally sequential within a well-defined structure. It is envisaged that this range of other subjects throughout the course. Subject streams are generally sequential within a well-defined structure. It is envisaged that this structure may be modified somewhat in the future with a view to further motivating students by allowing them a greater degree of flexibility and specialisation, once a firm foundation has been established in the early years of the course. The incorporation of more flexibility should also allow students to remedy any perceived deficiencies in the more basic communication and technical skills.

A study abroad exchange program is under investigation with the Department of Civil Engineering at the University of Nebraska at Omaha, Nebraska, USA.

**Course Objectives**

The course is designed to develop skills for the application of engineering principles of planning, design, construction and management of buildings, roads, water supply and all other major community amenities.

**Admission Requirements**

The prerequisite subjects for admission into the first year of the course are based on entry at post Year 12, Victorian Certificate of Education, or equivalent level, and are as follows.

Persons transferring from other courses or having overseas or other entrance qualifications of at least equivalent standard to those listed above, should apply for admission in the normal manner. A preliminary interview with the Head of School concerned is advisable for such applicants.

Full-fee paying international students must have qualifications which are equivalent to those listed above. In addition, they must provide evidence of proficiency in the English language:

- IELTS – an overall band score of 6+, subject to individual profile, or
- TOEFL – a score of 550+, and a Test of Written English (TWE) score of 5+.

**Course Duration**

The course is offered over four years on a full-time basis. Part-time study may be approved. However the course cannot be completed solely on a part-time basis. Students must complete 384 credit points.

**Course Structure**

Engineering subject codes commence with 'V'. Science subject codes commence with 'R'.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN1051 ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td></td>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>REP1003 ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RMA1002 ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN1022 SOLID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN1032 INTRODUCTION TO DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VAC2071 SURVEYING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2021 SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2041 THERMOFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2061 ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
## Faculty of Health, Engineering and Science

### Pre-2005 From 2005 Full Fee

<table>
<thead>
<tr>
<th>Year 2 Semester Two</th>
<th>Credit Points</th>
<th>EFTSL SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAC2022 BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VAC2042 HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VAC2072 HIGHWAY ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

### Year 3 Semester One

| VAC3021 STRUCTURAL ANALYSIS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC3031 CIVIL ENGINEERING DESIGN 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC3041 HYDROLOGY AND WATER RESOURCES | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC3061 GEOMECHANICS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

### Year 3 Semester Two

| VAC3042 HYDRAULIC ENGINEERING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC3062 GEOTECHNICAL ENGINEERING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC3092 STRUCTURAL DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAN3052 ENGINEERING MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

### Year 4 Semester One

| VAC4071 TRANSPORTATION ENGINEERING | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAC4081 ENVIRONMENTAL ENGINEERING 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC4091 STRUCTURAL ENGINEERING DESIGN 1 | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAN4011 ENGINEERING PROJECT 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAN4051 ENGINEERING PROJECT MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

### Year 4 Semester Two

| VAC4032 CIVIL ENGINEERING DESIGN 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC4072 ENVIRONMENTAL PLANNING AND DESIGN | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAC4082 ENVIRONMENTAL ENGINEERING 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAC4092 STRUCTURAL ENGINEERING DESIGN 2 | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAN4012 ENGINEERING PROJECT 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

### Electives

May be taken to a value of 6, 12 or 18 CP depending on which of VAC4072, VAC4091 and/or VAC4092 is done (18 max)

*Approved Electives from within the School of ACME

| VAA2031 ARCHITECTURAL HISTORY & DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAA3042 HYDRAULIC SERVICES SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAA3081 BUILDING CONSTRUCTION AND LEGISLATION 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VAA4051 BUILDING QUANTITIES AND COSTS | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2 | 6 | 0.0630 | 2 | $366 | $457 | $798 |
| VAM2011 COMPUTATIONS AND ENGINEERING ANALYSIS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| VEM2012 ELECTRICAL ENGINEERING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

### Electives from outside School of ACME

(Subject to approval by Course Co-ordinator)

### Other Course Specific Notes

Assessment in subjects is designed to monitor a student's progress and achievements as well as contribute to and enhance their learning. Normally a prescribed range of assessment methods is employed in any subject.

Assessment is by a combination of written assignments, tests, laboratory work and examinations. Supplementary assessment is not normally available in any subject except at the discretion of the Head of School in exceptional circumstances. Special Consideration in assessment may be granted on the grounds defined by the University Statutes.

Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers.

Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been made.

### Degree with Honours

A Degree with Honours Program is offered concurrently with the fourth year of the ordinary Bachelor of Engineering program. Normally, students entering the final year of a full-time Bachelor of Engineering program (or its equivalent in part-time mode), will be offered honours candidacy, if they have achieved a minimum hour weighted average of 60 per cent over year levels 1 to 3, have not repeated a subject throughout levels 1 to 3 and have not been granted more than one year completion by compensation throughout the duration of the course. Fourth year honours degree gradings will be determined by the relevant Examiners Board on the basis of the hour weighted average for year level 4.

### Industrial Experience

Candidates applying for the award of a degree in civil engineering must ensure that they have submitted for approval evidence of having undertaken a minimum of 12 weeks industrial experience relevant to the course to satisfy Engineers Australia requirements.

### Professional Recognition

Engineers Australia has granted full recognition for the Bachelor of Engineering in Civil Engineering. Recognition is a requirement for Graduate Membership of Engineers Australia and additionally for equivalent membership of many overseas professional engineering institutions.

### Overseas Exchange Program

Victoria University has exchange agreements with universities in many countries, some of which are the U.S.A., Canada, Mexico, United Kingdom and many European and Asian countries.

For those students who do wish to study abroad, there is the opportunity to experience living in a different culture and environment, and to develop self-reliance and reliance skills. Many students achieve improved results in their remaining studies after returning home, having developed a clearer perception of their future career with a stronger determination to succeed.
BACHELOR OF ENGINEERING IN MECHANICAL ENGINEERING (I)

Course Code: EBME

The degree is designed to provide the broad education required for a mechanical engineering career. In addition to theoretical and practical engineering content, the course contains integrated studies in economics, administration and communication. The degree emphasises achievement across mechanical engineering disciplines in concert with problem solving, design, engineering applications, innovation, resource management and professional responsibility.

Government institutions and private enterprise employ mechanical engineers in manufacturing, design of products and machines, automatic control of machines and processes, heating and air conditioning systems, machine and condition monitoring, hydraulic and pneumatic systems, computer applications – including finite element analysis, computer-aided design and Computational Fluid Dynamics and research and development in a wide range of fields.

Course Objectives

The course is designed to provide an educational standard and vocational skills which will enable graduates to undertake professional practice in the discipline of Mechanical Engineering. Graduates are provided with a basis to progress through postgraduate studies, continuing education courses and participate in learned society endeavours.

Admission Requirements

The prerequisite subjects for admission into the first year of the course are based on entry at post Year 12, Victorian Certificate of Education, or equivalent level and are as follows.

Persons transferring from other courses or having overseas or other entrance qualifications of at least equivalent standard to those listed above, should apply for admission in the normal manner.

Full-fee paying international students must have qualifications which are equivalent to those listed above. In addition, they must provide evidence of proficiency in the English language:

- IELTS – an overall band score of 6+, subject to individual profile; or
- TOEFL – a score of 550+, and a Test of Written English (TWE) score of 5+.

Course Duration

The course is offered over four years on a full-time basis. The entire course cannot be completed on a part-time basis. Students must complete 384 credit points.

Course Structure

Engineering subject codes commence with 'V'.
Science subject codes commence with 'R'.

<table>
<thead>
<tr>
<th>Year 1 Semester One</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN1051 ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 Semester Two</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1002 ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>REP1003 ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN1032 INTRODUCTION TO DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN1022 SOLID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester One</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM2011 COMPUTATIONS AND ENGINEERING ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2021 SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2001 ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2041 THERMFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester Two</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEM2012 ELECTRICAL ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2062 MATERIALS AND MANUFACTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN2042 THERMODYNAMICS AND FLUID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester One</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM3021 STRESS ANALYSIS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3071 DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3031 MECHANICAL ENGINEERING DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3041 THERMODYNAMICS AND FLUID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester Two</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM3012 SIGNAL ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3022 STRESS ANALYSIS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3072 MECHANICAL VIBRATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM3062 ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester One</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM4021 COMPUTATIONAL MECHANICS</td>
<td>6</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM4041 HEAT TRANSFER AND COMBUSTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 4 Semester Two</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAM4032 MECHANICAL ENGINEERING DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAM4042 FLUID DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>
Graduates of this course will have had the opportunity to experience learning in a dual sector environment that assists them in both finding and social change with social justice initiatives.

Admission Requirements

Admission at other levels may be approved, e.g., in the case of an applicant having commenced or completed studies leading to a Diploma or...
Course Structure

Year 1 and Year 2

Diploma of Building Surveying

- BCGSV5001A Assess the construction of domestic scale buildings * 100
- BCGSV5002A Evaluate materials for construction of domestic scale buildings * 72
- BCGSV5003A Produce working drawings for residential buildings * 90
- BCGSV5004A Apply legislation to urban development and building controls * 36
- BCGSV5005A Apply footing and geomechanical design principles for domestic scale buildings * 36
- BCGSV5006A Assess construction faults in residential buildings * 36
- BCGSV5007A Undertake site surveys and set out procedures to building projects * 72
- BCGSV5008A Apply building control legislation to building surveying * 36
- BCGSV5009A Assess the impact of fire on building materials * 36
- BCGSV5010A Interact with clients in a regulated environment * 36
- BCGSV5011A Apply building codes and standards to residential buildings * 36
- BCGSV5012A Assess timber framed designs for one and two storey buildings * 36
- BCGSV5013A Apply principles of energy efficient design to buildings * 36
- BCGSV5014A Apply building surveying procedures to residential buildings * 36
- BCGSV5015A Assess structural requirements for domestic scale buildings * 72
- BSBADM506A Manage business document design and development * 60
- BSSCMN406A Maintain business technology * 40
- CHCCOM3A Utilise specialist communication skills * 50
- CHCCOM4A Develop, implement and promote effective communication techniques * 75
- ICAITU128A Operate a personal computer * 30
- ICAITU129A Operate a word processing application * 30
- ICAITU130A Operate a spreadsheet application * 30
- ICAITU131A Operate a database application * 30
- ICAITU133A Send and retrieve information over the internet using browsers and email * 25

Subtotal for Diploma 1136

plus Higher Education/Foundation Studies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (A$)</th>
<th>From 2005 (A$)</th>
<th>Full Fee (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAN1051</td>
<td>ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

Total for Years 1 and 2 N/A 1268

Year 3

Advanced Diploma of Building Surveying

- BCGSV6001A Assess the construction of buildings up to 3 storey * 72
- BCGSV6002A Produce working drawings for buildings up to 3 storey * 40
- BCGSV6003A Assess construction faults in buildings up to 3 storey * 40
- BCGSV6004A Apply footings and geomechanical design principles to buildings up to 3 storey * 40
- BCGSV6005A Evaluate services layout and connection methods for residential and commercial buildings up to 3 storey * 40
- BCGSV6006A Evaluate the use of concrete for residential and commercial buildings up to 3 storey * 40
- BCGSV6007A Assess structural requirements for buildings up to 3 storey * 40
- BCGSV6008A Apply building codes and standards to buildings up to 3 storey * 72
- BCGSV6009A Implement performance based codes and risk management principles for buildings up to 3 storey * 72
- BCGSV6010A Apply fire technology to buildings up to 3 storey * 40
- BCGSV6011A Apply legal procedures to building surveying * 40
- BCGSV6012A Facilitate community development consultation * 40
- BCGSV6013A Co-ordinate asset refurbishment * 72
- BCGSV6014A Manage and plan land use * 40
- BCGSV6015A Analyse and present building surveying research information * 90
- BCGSV6016A Apply building surveying procedures to buildings up to 3 storey * 90
- BSX154L606 Manage human resources * 40
- LGAPELM502A Apply ecologically sustainable development principles to the built environment * 60
- LMFFT4010A Identify and calculate production costs * 36

Subtotal for Advanced Diploma 1004

plus Higher Education

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (A$)</th>
<th>From 2005 (A$)</th>
<th>Full Fee (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1001</td>
<td>ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Total for Year 3 N/A 1064

Year 4

Includes subjects as prescribed for Graduate Certificate in Performance-Based Building and Fire Codes

Semester One

- VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VQB5621 FIRE GROWTH, DETECTION AND EXTINGUISHMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VAN4011 ENGINEERING PROJECT 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VAN4051 ENGINEERING PROJECT MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Subtotal for Semester One 48 186

Semester Two

- VQB5632 SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VQB5642 PERFORMANCE CODES METHODOLOGY AND STRUCTURE | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VAN4012 ENGINEERING PROJECT 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
- VAN3052 ENGINEERING MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Subtotal for Semester Two 48 186
GRADUATE DIPLOMA IN PROJECT MANAGEMENT

Course Code: EGPM

The Graduate Diploma in Project Management at Victoria University was the first such course set up in Victoria, and only the second in Australia. Throughout all its first decade it has been an industry leader. When the first Graduate Diploma in Project Management began in 1984, the focus was on the narrowly technical. Now, the course is concerned with the human and social perspective; with building teams that work well together and with placing the management of the project firmly within the wider environment.

Course Objectives

The course is designed specifically to meet the needs of current or potential managers in the building construction and related industries. It will equip the professionals already in the industry with advanced principles and techniques of project management to enable them to assume the role of project manager and/or become effective members of project management teams.

Admission Requirements

Applicants should have a degree or diploma in architecture, building, construction, engineering, quantity surveying, or other relevant discipline and at least two years of experience or current employment at professional level in the relevant field. Suitable proof of these will be required prior to enrolment.

Other qualifications may be considered acceptable and the formal qualification requirements may be waived in exceptional circumstances. In addition, all applicants applying as full-fee paying international students must provide evidence of proficiency in the English language:

- IELTS – an overall band score of 6+, subject to individual profile;
- TOEFL – a score of 550+, and a Test of Written English score of 5+.

Course Duration

The course is offered on a full-time basis over one year for full-fee paying international students or on a part-time basis over a minimum of two years.

Course Structure

The course consists of eight subjects as follows: four ‘core’ subjects to develop a basic knowledge in fundamentals of project management, project planning and control, project management of contracts and industrial relations in the building and construction industry; four ‘electives’ are selected to achieve a better understanding and working knowledge of all disciplines involved in management of a project. Students must complete 96 credit points.

### Year 1

<table>
<thead>
<tr>
<th>Compulsory core subjects</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (A$)</th>
<th>From 2005 (A$)</th>
<th>Full Fee (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMO5589 INDUSTRIAL RELATIONS AND THE BUILDING INDUSTRY (SERVICE UNIT OF STUDY)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5610 PROJECT MANAGEMENT PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5620 PROJECT MANAGEMENT AND CONTRACTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

**Elective subjects**

Four electives are selected from the following:

| VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY         | 12           | 0.1250| 2       | $726          | $908           | $1,584        |
| VCP5716 PROJECT DEVELOPMENT                                   | 12           | 0.1250| 2       | $726          | $908           | $1,584        |
| VCP5726 PROJECT PROCUREMENT MANAGEMENT                        | 12           | 0.1250| 2       | $726          | $908           | $1,584        |
| VCP5736 FACILITY LIFE CYCLE COSTING                            | 12           | 0.1250| 2       | $726          | $908           | $1,584        |
| VCP5745 BUILDING REGULATORY MANAGEMENT                         | 12           | 0.1250| 1       | $510          | $637           | $1,430        |
| VCP5800 TELECOMMUNICATIONS PROJECT MANAGEMENT PLUS APPROVED SUBJECTS CURRENTLY AVAILABLE AT VICTORIA UNIVERSITY, FOOTSCRAY PARK CAMPUS | 12           | 0.1250| 2       | $726          | $908           | $1,584        |

Other Course Specific Notes

Assessment will be by projects, submission and examination. Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers.

Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been made.

GRADUATE DIPLOMA IN PROJECT MANAGEMENT

Course Code: EGPR

Course Objectives

To provide students with a conceptual understanding of relevant models, modes of analysis and techniques for understanding and procurement. They will also have developed the ability to apply and carrying out project management, contract management and evaluate these models, modes of analysis and techniques in the context of the legal, ethical and accountability requirements which apply. In addition to the technical skills provided in the course, graduates will have developed strong relevant professional skills as well as strong personal, interpersonal and organisational.
attributes. By utilising a consultative committee of current project management professionals, the course has been designed to meet the needs of project managers in industry, equip professionals already in industry with advanced principles and techniques to enable them to assume the role of project manager / and or become effective member of project management teams. adopt a unique approach to mange people, resources, time line and risks to achieve a successful project outcome.

**Course Duration 1 year (full time)**

Admission Requirements A degree or a diploma in any discipline and a minimum of 2 years post-qualification experience. The requirement of qualification may be waived in exceptional circumstance on the basis of experience.

**Course Structure**

<table>
<thead>
<tr>
<th>Year One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VPP5600 PRINCIPLES OF PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AHB5205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BM05519 CONTRACT AND PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plus two electives from Group (b) or (c) as listed below. Students may exit with a Graduate Certificate in Project Management after successfully completing 4 units (48 credit points).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose one unit from the following core units not undertaken in semester one:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VPP5600 PRINCIPLES OF PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AHB5205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GROUP A – Faculty Based Core Units (12 credit points each)**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP5610 PROJECT PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>BM05602 BUSINESS PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

**GROUP B – Project Management Specific Electives (12 credit points each)**

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP5620 PROJECT STAKEHOLDERS MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VPP5621 PROJECT RISK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6013 PROJECT MANAGEMENT AND ENTREPRENEURSHIP</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VPP8050 PROJECT MANAGEMENT SPECIFIC TOPIC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(PROJECT WORK – 12CP)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT, ANALYSIS AND REVIEW</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VCP5736 FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>VPP5630 RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Students may exit with a Graduate Diploma in Project Management after successfully completing 8 units (96 credit points).

**MASTER OF ENGINEERING IN MECHANICAL ENGINEERING (COURSEWORK) (I)**

**Course Code:** EMME

**Course Objectives**

The aim of this course is to provide students with an opportunity to achieve in-depth comprehension of engineering fundamentals and advanced skills of research and development essential in modern practice of Mechanical Engineering.

**Admission Requirements**

Admission to the course may be granted to the following applicants:

- holders of a Four Year Bachelor of Mechanical Engineering degree, or an equivalent, accredited for Graduate membership of the Institution of Engineers, Australia, having either an Honours degree or an ordinary degree with significant professional industrial experience.
- applicants with overseas degree in Mechanical Engineering at least at Bachelor level and judged by the School of Architectural, Civil and Mechanical Engineering to be of excellent standard.
- Applicants with qualifications at least at Bachelor level in other engineering and science disciplines with a minimum of three years industrial experience.

In addition, full fee international students must provide evidence of proficiency in the English Language:

- IELTS – an overall band score of 6+;
- TOEFL – a minimum score of 550+ and a TWE (Test of Written English) score of 5+.

**Course Duration**

The course is offered over a period of two years full time. Applicants of exceptional standard may get exemption of Semester1 and may complete the course in one-and-a-half years full time.

**Course Structure**

(exemption of one or more subjects in this Semester is considered on a case by case basis).

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMY5682 EXPERIMENTAL TECHNIQUES AND SIGNAL PROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMCM5762 NUMERICAL TECHNIQUES AND PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMW5682 MANUFACTURING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5610 PROJECT MANAGEMENT PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMCM5771 COMPUTER AIDED ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMV5781 ADVANCED DYNAMICS AND VIBRATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMF5881</td>
<td>ADVANCED FLUID-THERMO DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMW5771</td>
<td>RESEARCH TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>**Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMV5782</td>
<td>COMPUTATIONAL DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMT5882</td>
<td>COMPUTATIONAL FLUID DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>VME5782</td>
<td>SPECIALIST ELECTIVE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMP5872</td>
<td>RESEARCH PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Other Course Specific Notes

Assessment of the coursework will be a combination of examinations, written assignments, tests, and laboratory work. To achieve a successful Minor Thesis student will have to demonstrate competence in research of an engineering problem, reviewing literature, collecting and analysing data, drawing conclusions and writing the thesis. Assessment of the Minor Thesis is entirely based on the thesis by two examiners, at least one is external to the University.

MASTER OF APPLIED PROJECT MANAGEMENT
Course Code: EMPA

Course Objectives
To provide students with a conceptual understanding of relevant models, modes of analysis and techniques for understanding and carrying out project management, contract management and procurement. They will also have developed the ability to apply and evaluate these models, modes of analysis and technique in the context of the legal, ethical and accountability requirements which apply. In addition to the technical skills provided in the course, graduates will have developed strong relevant professional skills as well as strong personal, interpersonal and organisational attributes. By utilising a consultative committee of current project management professionals, the course has been designed to: meet the needs of project managers in industry. equip professionals already in industry with advanced principles and techniques to enable them to assume the role of project manager / and or become effective member of project management teams. adopt a unique approach to manage people, resources, time line and risks to achieve a successful project outcome.

Course Duration 2 years (full time)
Admission Requirements A degree or a diploma in any discipline and a minimum of 2 years post-qualification experience. The requirement of qualification may be waived in exceptional circumstance on the basis of experience.

Course Structure

Year One

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Choose two units from the following CORE units:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VPP5600</td>
<td>PRINCIPLES OF PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>AHBS205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMO5519</td>
<td>CONTRACT AND PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>Plus two electives from Group (b) or (c) as listed below.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students may exit with a Graduate Certificate in Project Management after successfully completing 4 units (48 credit points).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Two

<table>
<thead>
<tr>
<th>Choose one unit from the following CORE units not undertaken in semester one:</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP5600 PRINCIPLES OF PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5519 CONTRACT AND PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>AHBS205</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose one unit from Group (a)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose one elective from Group (b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Choose one elective from Group (c) or any other approved VU elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students may exit with a Graduate Diploma in Project Management after successfully completing 8 units (96 credit points).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Year Two

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP5630</td>
<td>RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>$726 $908 $1,584</td>
<td>$1,584</td>
</tr>
<tr>
<td>Choose three electives from Group (c) and or any other approved VU elective.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Semester Four

| VPP8000         | MINORThESIS (FULL TIME – OVER 1 SEMESTER)          | 48    | 0.5000  | $2,904 $3,630 $6,336   | $6,336         |
|                | or                                                   |       |         |                        |                |
| VPP8070         | MINORThESIS (PART TIME – OVER 2 SEMESTERS)          | 24    | 0.5000  | $2,904 $3,630 $6,336   | $6,336         |
| (over 2 semesters part-time)                                       |       |         |         |                        |                |

List of Core Units and Electives

Project Management Core units (12 credit points each)

<p>| VPP5600 PRINCIPLES OF PROJECT MANAGEMENT                          | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| AHBS205                                                           |       |         |         |                        |                |
| BMO5519 CONTRACT AND PROCUREMENT MANAGEMENT                      | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| Group A Faculty Based Core Units (12 credit points each)        | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| VPP5610 PROJECT PLANNING AND CONTROL                            |       |         |         |                        |                |
| BMO5600                                                          |       |         |         |                        |                |
| AHBS201 SPORT RESOURCE MANAGEMENT                                 | 12    | 0.1250 | 1       | $510 $637 $1,430       | $1,430         |
| Group B – Project Management Specific Electives (12 credit points each) |       |         |         |                        |                |
| VPP5620 PROJECT STAKEHOLDERS MANAGEMENT                          | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| VPP5621 PROJECT RISK MANAGEMENT                                   | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| VEHE013 PROJECT MANAGEMENT AND ENTREPRENEURSHIP                   | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| VPP8050 PROJECT MANAGEMENT SPECIFIC TOPIC                        |       |         |         |                        |                |
| (PROJECT WORK – 12CP)                                            | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |
| VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY            | 12    | 0.1250 | 2       | $726 $908 $1,584       | $1,584         |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP5716</td>
<td>PROJECT DEVELOPMENT ANALYSIS AND REVIEW</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5736</td>
<td>FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5745</td>
<td>BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>VPP5630</td>
<td>RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td><strong>Group C – Business Units (12 credit points each)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMO6630</td>
<td>BUSINESS RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO6622</td>
<td>MANAGING INNOVATION AND ENTREPRENEURSHIP</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM06522</td>
<td>HUMAN RESOURCES AND EMPLOYEE RELATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM06510</td>
<td>GOVERNMENT AND BUSINESS RELATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0575</td>
<td>PLANNING AND CONTROL THROUGH ERP SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO5406</td>
<td>LAW FOR EVENTS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLO537</td>
<td>BUSINESS LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>BA05505</td>
<td>ACCOUNTING FOR EVENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BA05735</td>
<td>ADVANCED FORECASTING, PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM05401</td>
<td>SPECIAL EVENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BCO4655</td>
<td>IT PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BHO6505</td>
<td>MARKETING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BEO5307</td>
<td>GLOBAL PROCUREMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BEO5522</td>
<td>PUBLIC SECTOR ECONOMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td><strong>Engineering &amp; Construction Units (12 credit points each)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VQB5611</td>
<td>RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5642</td>
<td>PERFORMANCE CODES METHODOLOGY AND STRUCTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5621</td>
<td>FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5632</td>
<td>SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5726</td>
<td>PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td><strong>Sustainability (12 credit points each)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCS5111</td>
<td>PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5112</td>
<td>SOLID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5132</td>
<td>ENVIRONMENTAL LAW AND STANDARDS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td><strong>Information Technology (12 credit points each)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6021</td>
<td>LOGISTICS SOLUTIONS AND SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5802</td>
<td>INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6823</td>
<td>DATABASE DESIGN, MANAGEMENT AND ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5820</td>
<td>NETWORK OPERATING SYSTEMS ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEC6142</td>
<td>MANAGING SOFTWARE PROJECTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEC6141</td>
<td>SOFTWARE ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td><strong>Sports Management (12 credit points each)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AHB5302</td>
<td>SPORT BUSINESS PROJECT</td>
<td>24</td>
<td>0.2500</td>
<td>1</td>
<td>$1,019</td>
<td>$1,274</td>
<td>$2,861</td>
</tr>
<tr>
<td>AHB5309</td>
<td>SPORT FACILITY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>AHM6020</td>
<td>SPORT AND RECREATION MANAGEMENT PROJECT DEVELOPMENT (FULL-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>1</td>
<td>$1,019</td>
<td>$1,274</td>
<td>$2,861</td>
</tr>
<tr>
<td>AHB5202</td>
<td>SPORT EVENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

**MASTER OF ENGINEERING (PROJECT MANAGEMENT) (I)**

Continuing students only

**Course Code:** EMPM

**Course Objectives**

Since 1990s government, industry and individuals increasingly recognise the Masters degree as an important benchmark measure of vocational and professional training. The Master of Engineering (Project Management) provides opportunities for professional engineers and managers to achieve high level training in contemporary engineering methods. The course gives students a large choice of both technical and managerial subjects, and it enables professional people to:

- develop advanced technical skills in a specialist discipline;
- develop their understanding of legislation and management relevant to their employment;
- develop ability to plan, co-ordinate and complete complex projects;
- apply and extend research and reporting skills and gain specialist knowledge of a topic relevant to their employment.

**Admission Requirements**

An honours degree in a relevant discipline and relevant work experience will normally be required to enter the course. Advanced entry may be approved for students who have completed at least four subjects of a relevant Graduate Diploma with an upper second class honours average. In addition, all applicants applying as full-fee paying international students must provide evidence of proficiency in the English language:

- IELTS – an overall band score of 6+, subject to individual profile;
- TOEFL – a score of 550+, and a Test of Written English (TWE) score of 5+.

**Course Duration**

The course is offered over one-and-a-half years on a full-time basis or over three years on a part-time basis. Students must complete 144 credit points.

**Course Structure**

Candidates must complete to a satisfactory standard eight approved subjects of three hours per week Class Contact selected from approved Graduate Diplomas of Engineering, or any other postgraduate subject deemed equivalent by the Course Co-ordinator, plus a minor thesis of 12 hours per week for one semester or six hours per week for two semesters, or ten subjects of three hours per week Class Contact selected from approved Graduate Diplomas of Engineering plus a thesis/project of six hours per week for one semester or three hours per week for two semesters.

The Masters Degree structure is:
### Year 1

#### Semester 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCP5600</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5589</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND TWO of Approved Elective Units of Study (12 Credit Points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCP5610</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5620</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND TWO of Approved Elective Units of Study (12 Credit Points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Year 2

#### Semester 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCC8054</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCC8055</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCC8040</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VCC8001</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VCC8011</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VCC8012</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

### The Masters Degree program uses subjects of the existing Graduate Diplomas within the area for the coursework content. Additionally, students who complete other Graduate Diploma courses with Honours averages may be admitted to the Degree with advanced standing.

### Students may choose from the following Graduate Diploma subjects:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLO5537 BUSINESS LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>BLO5513 LAW OF EMPLOYMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BAO5735 ADVANCED FORECASTING, PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO6502 LAW FOR MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5537 TOPICS IN EMPLOYEE RELATIONS MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5589 INDUSTRIAL RELATIONS AND THE BUILDING INDUSTRY (SERVICE UNIT OF STUDY)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5602 QUALITY MANAGEMENT AND STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5801 INTRODUCTION TO COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5610 PROJECT MANAGEMENT PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5620 PROJECT MANAGEMENT AND CONTRACTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5736 FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>VCP5800 TELECOMMUNICATIONS PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### Other Course Specific Notes

Assessment will be by a combination of written assignments, oral presentations, case studies, written examination and by the satisfactory completion of a thesis. Except in special circumstances supplementary assessment for subjects taught by the School of Architectural, Civil and Mechanical Engineering will not be offered.

Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers.

Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been made.

### MASTER OF PROJECT MANAGEMENT (I)

**Course Code:** EMPR

**Course Objectives**

To provide students with a conceptual understanding of relevant models, modes of analysis and techniques for understanding and procurement. They will also have developed the ability to apply and carry out project management, contract management and evaluate these models, modes of analysis and technique in the context of the legal, ethical and accountability requirements which apply. In addition to the technical skills provided in the course, graduates will have developed strong relevant professional skills as well as strong personal, interpersonal and organisational attributes. By utilising a consultative committee of current project management professionals, the course has been designed to meet the needs of project managers in industry, equip professionals already in industry with advanced principles and techniques to enable them to assume the role of project manager / and or become effective member of project management teams. Adopt a unique approach to manage people, resources, timeline and risks to achieve a successful project outcome.

**Course Duration**

1.5 years (full time)

**Admission Requirements**

A degree or a diploma in any discipline and a minimum of 2 years post-qualification experience. The requirement of qualification may be waived in exceptional circumstance on the basis of experience.
## School of Architectural, Civil and Mechanical Engineering

### Course Structure

<table>
<thead>
<tr>
<th>Year One</th>
<th>Semester One</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose two units from the following CORE units:</td>
<td>VPP5600 PRINCIPLES OF PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>AHBS5205</td>
<td>BM05519 CONTRACT AND PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>Plus two electives from Group (b) or (c) as listed below.</td>
<td>AHBS5205</td>
</tr>
<tr>
<td>Students may exit with a Graduate Certificate in Project Management after successfully completing 4 units (48 credit points).</td>
<td></td>
</tr>
</tbody>
</table>

### Semester Two

| Choose one unit from the following CORE units not undertaken in semester one: | VPP5600 PRINCIPLES OF PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| BM05519 CONTRACT AND PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| AHBS5205 | Choose one unit from Group (a) |
| Choose one elective from Group (b) | VPP5630 RESEARCH METHODS 12 0.1250 2 $726 $908 $1,584 |
| Students may exit with a Graduate Diploma in Project Management after successfully completing 8 units (96 credit points). | |

### Year Two

<table>
<thead>
<tr>
<th>Semester Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP8080 PROJECT MANAGEMENT SPECIFIC TOPIC (PROJECT WORK – 24CP) 24 0.2500 2 $1,452 $1,815 $3,168</td>
</tr>
<tr>
<td>Choose two electives from Group (c) and or any other approved VU elective.</td>
</tr>
<tr>
<td>Students may exit with a Masters in Project Management after successfully completing the equivalent of 12 units (144 credit points). Students continuing to the Master of Applied Project Management should refer to the structure of the course presented under EMPA</td>
</tr>
</tbody>
</table>

### List of Core Units and Electives

#### Project Management Core units (12 credit points each)

| VPP5600 PRINCIPLES OF PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| AHBS5205 |
| BM05519 CONTRACT AND PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |

#### Group A Faculty Based Core Units (12 credit points each)

| VPP5610 PROJECT PLANNING AND CONTROL 12 0.1250 2 $726 $908 $1,584 |
| BM05602 BUSINESS PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| AHBS5201 SPORT RESOURCE MANAGEMENT 12 0.1250 1 $510 $637 $1,430 |

#### Group B – Project Management Specific Electives (12 credit points each)

| VPP5620 PROJECT STAKEHOLDERS MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| VPP5621 PROJECT RISK MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| VEH6013 PROJECT MANAGEMENT AND ENTREPRENEURSHIP 12 0.1250 2 $726 $908 $1,584 |

#### Group C – Business Units (12 credit points each)

| BM06830 BUSINESS RESEARCH METHODS 12 0.1250 2 $726 $908 $1,584 |
| BM06822 MANAGING INNOVATION AND ENTREPRENEURSHIP 12 0.1250 2 $726 $908 $1,584 |
| BM06522 HUMAN RESOURCES AND EMPLOYEE RELATIONS 12 0.1250 2 $726 $908 $1,584 |
| BM06510 GOVERNMENT AND BUSINESS RELATIONS 12 0.1250 2 $726 $908 $1,584 |
| BM05755 PLANNING AND CONTROL THROUGH ERP SYSTEMS 12 0.1250 2 $726 $908 $1,584 |

#### BLOG5040 LAW FOR EVENTS 12 0.1250 3 $850 $1,062 $2,083 |
| BLOG5537 BUSINESS LAW 12 0.1250 1 $510 $637 $1,430 |
| BAO5505 ACCOUNTING FOR EVENTS 12 0.1250 2 $726 $908 $1,584 |
| BAO5735 ADVANCED FORECASTING, PLANNING AND CONTROL 12 0.1250 2 $726 $908 $1,584 |
| BM05401 SPECIAL EVENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| BCO4666 IT PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| BHO6505 MARKETING MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| BEO5307 GLOBAL PROCUREMENT 12 0.1250 2 $726 $908 $1,584 |
| BE05522 PUBLIC SECTOR ECONOMICS 12 0.1250 2 $726 $908 $1,584 |

#### Engineering & Construction Units (12 credit points each)

| VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR 12 0.1250 2 $726 $908 $1,584 |
| VQB5642 PERFORMANCE CODES METHODOLOGY AND STRUCTURE 12 0.1250 2 $726 $908 $1,584 |
| VQB5621 FIRE GROWTH, DETECTION AND EXTINGUISHMENT 12 0.1250 2 $726 $908 $1,584 |
| VQB5632 SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN 12 0.1250 2 $726 $908 $1,584 |
| VC57526 PROJECT PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |

#### Sustainability (12 credit points each)

| RCS5111 PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| RCS5131 WATER POLLUTION MONITORING & LIQUID WASTE MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
| RCS5172 SOLID WASTE MANAGEMENT 12 0.1250 2 $726 $908 $1,584 |
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

(AUS) (AUS) (AUS)

RCS5132 ENVIRONMENTAL LAW AND STANDARDS 2 12 0.1250 2 $726 $908 $1,584

Information Technology (12 credit points each)

RCM6021 LOGISTICS SOLUTIONS AND SYSTEMS 12 0.1250 2 $726 $908 $1,584
RCM5802 INFORMATION SYSTEMS 12 0.1250 2 $726 $908 $1,584
RCM6823 DATABASE DESIGN, MANAGEMENT AND ADMINISTRATION 12 0.1250 2 $726 $908 $1,584
RCM5820 NETWORK OPERATING SYSTEMS ADMINISTRATION 12 0.1250 2 $726 $908 $1,584
VEC6142 MANAGING SOFTWARE PROJECTS 12 0.1250 2 $726 $908 $1,584
VEC6141 SOFTWARE ENGINEERING 12 0.1250 2 $726 $908 $1,584

Sports Management (12 credit points each)

AHB5302 SPORT BUSINESS PROJECT 24 0.2500 1 $1,019 $1,274 $2,861
AHB5309 SPORT FACILITY MANAGEMENT 12 0.1250 1 $510 $637 $1,430
AHM6020 SPORT AND RECREATION MANAGEMENT PROJECT DEVELOPMENT (FULL-TIME) 24 0.2500 1 $1,019 $1,274 $2,861
AHB5202 SPORT EVENT MANAGEMENT 12 0.1250 1 $510 $637 $1,430

GRADUATE CERTIFICATE IN PROJECT MANAGEMENT

Course Code: ETPM

The School of Architectural, Civil and Mechanical Engineering conducts the Graduate Diploma in Project Management and the Masters of Engineering in Project Management. Currently, major initiatives are in progress which will require professionals to practice only in certain areas based on their qualifications and experience. This is particularly the case in the field of project management.

Course Objectives

The course provides opportunities for professional people to:
(a) develop advanced technical skills in a specialist discipline;
(b) develop their understanding of legislation and management relevant to their employment;
(c) develop ability to plan, co-ordinate and complete complex projects;
(d) apply and extend research and reporting skills and gain specialist knowledge of a topic relevant to their employment.

The course will be directed at registered building surveyors and other building practitioners such as architects, engineers, quantity surveyors, etc., with at least one year of relevant professional experience. Other professions directly affected by performance regulations will be encouraged to participate.

The aims of the course are to:
• introduce the concepts and alternative acceptable frameworks for performance based codes, with particular, but not exclusive, emphasis given to project management practices;
• provide building engineering and allied professions with the appropriate knowledge and skills necessary for the assessment and application of performance-based project management practices;
• develop an appreciation of the legal, statutory and design integrity requirements and the need for compliance of the design assumptions throughout the operational life of the building or facility; and
• develop a recognition of the desirability of undertaking additional courses to further upgrade skills and expertise.

Admission Requirements

Qualifications accepted are a degree or diploma or associate diploma in Engineering or Building or Quantity Surveying or Architecture or Construction from a University or College of Advanced Education or Technical and Further Education in Australia.

Applicants with other qualifications deemed to be equivalent to the degree, diploma or associate diploma may be admitted. Applicants must have at least one year of relevant experience in the design, construction and/or management of building and engineering projects before being admitted to the course.

The formal qualification requirements may be waived in exceptional circumstances.

• IELTS – an overall band score of 6+, subject to individual profile.
• TOEFL – a score of 550+, and a Test of Written English score of 5+.

Course Duration

The course will be delivered as follows:
• each subject will be presented as a three-hour session one evening per week for one semester;
• two subjects will be presented each semester.

The course will be presented over two semesters during a 12-month period.

Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Project Management subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subjects</td>
<td></td>
</tr>
<tr>
<td>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP6610 PROJECT MANAGEMENT PLANNING AND CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>Elective Subjects</td>
<td></td>
</tr>
<tr>
<td>VCP5620 PROJECT MANAGEMENT AND CONTRACTS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP5736 FACILITY LIFE CYCLE COSTING 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT 12 0.1250 1 $510 $637 $1,430</td>
<td></td>
</tr>
<tr>
<td>VCP5800 TELECOMMUNICATIONS PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
</tr>
</tbody>
</table>

plus approved subjects currently available at Victoria University, Footscray Park Campus, such as:

Computer Science (semesters to be advised)

RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS 12 0.1250 2 $726 $908 $1,584
RCM5801 INTRODUCTION TO COMPUTER SCIENCE 12 0.1250 2 $726 $908 $1,584
RCM5802 INFORMATION SYSTEMS 12 0.1250 2 $726 $908 $1,584
Decision Support Science
RCM5602 QUALITY MANAGEMENT AND STATISTICS 12 0.1250 2 $726 $908 $1,584

Business Management
BAO5735 ADVANCED FORECASTING, PLANNING AND CONTROL 12 0.1250 2 $726 $908 $1,584
BLO5513 LAW OF EMPLOYMENT 12 0.1250 2 $726 $908 $1,584
BLO5537 BUSINESS LAW 12 0.1250 1 $510 $637 $1,430
BLO6502 LAW FOR MANAGEMENT 12 0.1250 2 $726 $908 $1,584

Industrial Relations
BMO5537 TOPICS IN EMPLOYEE RELATIONS MANAGEMENT 12 0.1250 2 $726 $908 $1,584
BMO5589 INDUSTRIAL RELATIONS AND THE BUILDING INDUSTRY (SERVICE UNIT OF STUDY) 12 0.1250 2 $726 $908 $1,584

The availability of electives from other areas/schools depends on staff resources and enrolments.

GRADUATE CERTIFICATE IN PROJECT MANAGEMENT
Course Code: ETPR

Course Objectives
To provide students with a conceptual understanding of relevant models, modes of analysis and techniques for understanding and carrying out project management, contract management and procurement. They will also have developed the ability to apply and evaluate these models, modes of analysis and technique in the context of the legal, ethical and accountability requirements which apply. In addition to the technical skills provided in the course, graduates will have developed strong relevant professional skills as well as strong personal, interpersonal and organisational attributes. By utilising a consultative committee of current project management professionals, the course has been designed to: meet the needs of project managers in industry, equip professionals already in industry with advanced principles and techniques to enable them to assume the role of project manager / and or become effective member of project management teams. adopt a unique approach to manage people, resources, time line and risks to achieve a successful project outcome.

Course Duration
One Semester (full time)

Admission Requirements
A degree or a diploma in any discipline and a minimum of 2 years post-qualification experience. The requirement of qualification may be waived in exceptional circumstance on the basis of experience.

Course Structure

Year One
Semester One
Choose two units from the following core units:
VPP5600 PRINCIPLES OF PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584
AHB5205
BMO5519 CONTRACT AND PROCUREMENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584

Plus two electives from Group (b) or (c) as listed below.

Students may exit with a Graduate Certificate in Project Management after successfully completing 4 units (48 credit points).

Group B – Project Management Specific Electives (12 credit points each)
VPP5620 PROJECT STAKEHOLDERS MANAGEMENT 12 0.1250 2 $726 $908 $1,584
VPP5621 PROJECT RISK MANAGEMENT 12 0.1250 2 $726 $908 $1,584
VEH6013 PROJECT MANAGEMENT AND ENTREPRENEURSHIP 12 0.1250 2 $726 $908 $1,584
VPP8050 PROJECT MANAGEMENT SPECIFIC TOPIC (PROJECT WORK – 12CP) 12 0.1250 2 $726 $908 $1,584
VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY 12 0.1250 2 $726 $908 $1,584
VCP5716 PROJECT DEVELOPMENT ANALYSIS AND REVIEW 12 0.1250 2 $726 $908 $1,584
VCP5736 FACILITY LIFE CYCLE COSTING 12 0.1250 2 $726 $908 $1,584
VCP5745 BUILDING REGULATORY MANAGEMENT 12 0.1250 1 $510 $637 $1,430
VPP5630 RESEARCH METHODS 12 0.1250 2 $726 $908 $1,584

Group C – Business Units (12 credit points each)
BMO6630 BUSINESS RESEARCH METHODS 12 0.1250 2 $726 $908 $1,584
BMO6622 MANAGING INNOVATION AND ENTREPRENEURSHIP 12 0.1250 2 $726 $908 $1,584
BMO5522 HUMAN RESOURCES AND EMPLOYEE RELATIONS 12 0.1250 2 $726 $908 $1,584
BMO6510 GOVERNMENT AND BUSINESS RELATIONS 12 0.1250 2 $726 $908 $1,584
BMO5575 PLANNING AND CONTROL THROUGH ERP SYSTEMS 12 0.1250 2 $726 $908 $1,584
BLO5406 LAW FOR EVENTS 12 0.1250 3 $850 $1,062 $2,083
BLO5537 BUSINESS LAW 12 0.1250 1 $510 $637 $1,430
BAO5505 ACCOUNTING FOR EVENTS 12 0.1250 2 $726 $908 $1,584
BAO5735 ADVANCED FORECASTING, PLANNING AND CONTROL 12 0.1250 2 $726 $908 $1,584
BMO5401 SPECIAL EVENT MANAGEMENT 12 0.1250 2 $726 $908 $1,584
BCO4656 IT PROJECT MANAGEMENT 12 0.1250 2 $726 $908 $1,584
BHO6505 MARKETING MANAGEMENT 12 0.1250 2 $726 $908 $1,584
BEO5307 GLOBAL PROCUREMENT 12 0.1250 2 $726 $908 $1,584
BEO5522 PUBLIC SECTOR ECONOMICS 12 0.1250 2 $726 $908 $1,584
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

SUBJECTS

Below are subject details for courses offered by the School of Architectural, Civil and Mechanical Engineering in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

VAA2002 ELECTRICAL POWER SYSTEMS 1
Campus Footscray Park
Prerequisite(s) REP 1003 Engineering Physics 1C

Content Electrical Circuits. Provides students with a sound knowledge of elementary electrical circuits, performance characteristics of motors and generators, and basic electronic devices.


Class Contact three hrs of lectures and two hrs of tutorials/laboratory per week
Assessment Electrical Circuits (EC) – 8 weeks work: Homework submissions (4 @ 5%), 20%; Laboratory Report, 10%; Mid-semester test (Based on weeks 1-6), 20%; Power Distribution (PD) – four weeks work: Homework submissions (2 @ 5%), 10%; Project (2000 words equivalence), 15%; three hour examination, 50%; Weighting, 66.7% of subject assessment.

Based on a project, 20%; and a review of all assignments (which may include tests and other class exercises) set during the semester, 10%; and a final three hour examination, 70%.

VAA2031 ARCHITECTURAL HISTORY & DESIGN
Campus Footscray Park
Prerequisite(s) Nil.

Content Slide presentation on the History of Architecture; Presentation of drawing/sketching techniques; Presentation of design concepts including Anthropometrics, Proportion, Light, Texture etc; Environmental influences; Workshops on freehand drawing; Workshops on model making.

Required Reading Victoria University, WebCT, web site resources for the subject.

Recommended Reading Sir Banister Fletcher, 'A History of Architecture', 19th or 20th edition; Le Corbusier, Towards a New Architecture (any other publications by), Le Corbusier, and Frank Lloyd Wright.

Class Contact three hrs of lectures and two hrs of tutorials per week
Assessment Submission of a report on the History of Architecture – 4000 words (individual report), 30%; Submission of drawing folio of class generated projects, 30%; Submission of 3D model, 40%; Based on a major project, 60%; and a review of all assignments (which may include tests, class exercises and seminar presentations) set during the semester, 40%; to an equivalent of 5000 words.

VAA3001 ELECTRICAL POWER SYSTEMS 2
Campus Footscray Park
Prerequisite(s) VAA 2002 Electrical Power Systems 1


Energy management in electrical power systems. Operational planning and maintenance of power systems.


Class Contact three hrs of lectures and two hrs of tutorials/laboratory per week
Assessment Class participation, 5%; Project, 30%; (individual report 5000 words equivalence); Final three hour examination, 65%.

VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1
Campus Footscray Park
Prerequisite(s) VAN2041 Thermofluids.

Learning Outcomes Upon successful completion of this unit, students will have demonstrated:
• an understanding of key issues and design principles involved in sustainable design of buildings and building engineering systems
• an ability to research information, policies and data relevant to these areas
• an ability to outline and evaluate possible solutions applicable to these areas
• an ability to work effectively as a member and/or leader of a team, and to time manage multiple tasks.
• good communication skills, based on technical reports and oral presentations.

Content This unit of study aims to give students a basic understanding, problem solving skills and design skills in the areas of sustainable design of buildings. Major topics covered include: climate change, basic principles of ecological buildings; buildings of tomorrow: examples and ideas, including natural ventilation in buildings, thermal storage, façade design for daylighting and solar energy transmission, air quality improvement; active measures of renewable energy usage, including solar, wind and geothermal energy; use of rainwater and organic material.

Required Reading Daniels, K., 1997, The Technology of Ecological Building, Birkhäuser; Class notes.


Class Contact This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group work, team meetings, lectures, workshops, seminars, practical work and site visits. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment / project reports including technical calculations, site visit and/or laboratory reports, a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

VAA3032 ENVIRONMENTALLY SUSTAINABLE DESIGN 2
Campus Footscray Park
Prerequisite(s) VAA3071 HVAC Systems 1, VAA3031 Environmentally Sustainable Design 1.

Corequisite(s) VAA3072 HVAC Systems 2

Learning Outcomes Upon successful completion of this unit, students will have demonstrated:
• an understanding of the fundamental principles of heat transfer in buildings.
• an ability to locate and effectively interpret information/data relevant to these areas.
• an ability to identify, formulate and solve related problems, and to carry out associated mathematical analyses.
• an ability to evaluate solutions against technical, environmental, economic and social criteria.
• good communication skills, based on technical reports and oral presentations.

Content This unit of study aims to give students a basic understanding, problem solving and design skills in the areas of building heat transfer and ventilation. It covers the following topics:


Class Contact This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group and individual work, team meetings, lectures, workshops, seminars and reading assignments. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment/project reports including technical calculations, site visit and/or laboratory reports, a reflective journal, workbooks(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

VAA3042 HYDRAULIC SERVICES SYSTEMS

Campus Footscray Park

Prerequisite(s) VAC2042 Hydraulics

Learning Outcomes Upon successful completion of this unit, students will have demonstrated:

- an understanding of key issues and design principles involved in hydraulic services systems in buildings
- an ability to locate and effectively use information / data relevant to these areas.
- an ability to identify, formulate and solve related problems, and to carry out associated design work.
- an ability to evaluate solutions against technical, environmental, economic and social criteria.
- an ability to work effectively as a member and/or leader of a team, and to time manage multiple tasks.
- good communication skills, based on technical reports and oral presentations.

Content This unit of study aims to give students a basic understanding, problem solving and design skills in the areas of building heat transfer and ventilation. It covers the following topics: Types and components of building water supply systems. Assessment of demands and flows. Design criteria, head losses in pipes and fittings. Analysis and design of hot and cold pipework systems. Pumps-pump and pipeline selection. Pressure systems. Selection and arrangement of mains pressure commercial hot water units to supply to hot water fixture outlets. Theory and design of roof drainage, storm water systems and sewer drainage systems including materials, fixtures and fittings, and the general requirements for fully vented and modified, single stack and modified sewage plumbing systems, all for building sites, residential and multi storied commercial buildings. Introduction to wastewater treatment processes and building water harvesting/recycling systems.

Required Reading Class Notes; AS 3500 (2003), National Plumbing and Drainage Code Parts 0-4.


VAA3071 HVAC SYSTEMS 1

Campus Footscray Park

Prerequisite(s) VAN2041 Theromofluids, VAC2042 Hydraulics.


Class Contact Two hrs of lectures and three hrs of tutorials per week

Assessment Assignment 1: (group assignment, up to 2500 words) 30%; Assignment 2: (group assignment; up to 2000 words + calculations + diagrams) 35%; two hour examination, 35%.

VAA3072 HVAC SYSTEMS 2

Campus Footscray Park

Prerequisite(s) HVAC Systems 1.


Class Contact Two hrs of lectures and three hrs of tutorials per week

Assessment Assignment 1 (group assignment, up to 2500 words), 30%; Assignment 2 (group assignment; up to 2000 words + calculations + diagrams), 35%; two hour examination, 35%.
**VAA3081 BUILDING CONSTRUCTION AND LEGISLATION 1**

**Campus** Footscray Park

**Prerequisite(s)** V28301 Architectural History and Design

**Learning Outcomes** Upon successful completion of this unit, students will have demonstrated:
- an understanding of the fundamentals of conventional and innovative forms of construction.
- familiarity with building terminology.
- an appreciation of the involvement of various building trades, professions, and authorities.
- knowledge in relation to building standards and statutory requirements.
- an understanding of the causes and treatment of common building problems.
- skills in the formulation of building schemes and details and the planning of construction work.

**Content** This unit of study aims to give students an understanding of various forms of construction and applicable standards relevant to building generally:

**Required Reading**
- Australian Building Codes Board (ABCB) (2005), Building Code of Australia (BCA) 2005 Volume Two, CanPrint Communications Pty Ltd; Class Notes.
- Class Contact This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group learning activities, lectures, workshops, seminars, practical work and site visits. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.
- Assessment Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment / project reports including graphical and written designs and specifications detailing creative building solutions appropriate to various property development applications, a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

**VAA4032 ENVIRONMENTALLY SUSTAINABLE DESIGN 3**

**Campus** Footscray Park

**Prerequisite(s)** VAA3032 Environmentally Sustainable Design 2, VAA4071 Architectural Lighting and Communication Systems, VAA3071 HVAC Systems 1, VAA3072 HVAC Systems 2.

**Course Content**
- Introduction to IES Virtual Environment software package of integrated building performance analysis tools (commercially used by architects, engineers, planners and facilities managers). Computer modelling of buildings including thermal and solar performance, natural ventilation, natural and artificial lighting and CFD. Analysis of alternative scenarios to optimise the performance of the building through the design process.

**Required Reading**
- IES Virtual Environment software manual; Notes provided by the lecturer; Class notes on WebCT.

**Class Contact**
- two hrs of lectures and three hrs of tutorials per week.
- Assessment Assignment 1: (group assignment; up to 3000 words; calculations diagrams), 30%; Assignment 2: 70%.

**VAA4042 BUILDING FIRE SAFETY SYSTEMS**

**Campus** Footscray Park

**Prerequisite(s)** Nil.


**Required Reading**
- Australian Building Codes Board (ABCB) (2005), Building Code of Australia (BCA) 2005 Volume One, CanPrint Communications Pty Ltd; Class Notes.

---

**FACULTY OF HEALTH, ENGINEERING AND SCIENCE**

**VAA4001 ARCHITECTURAL LIGHTING AND COMMUNICATIONS SYSTEMS**

**Campus** Footscray Park

**Prerequisite(s)** V28301 Electrical Power Systems 2.

**Course Content**

**Required Reading**

**Class Contact**
- three hrs of lectures and two hrs of tutorials/laboratory per week.

**Assessment**

---

**Recommended Reading**
SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING


**Prerequisite(s) VAA4071 HVAC SYSTEMS 3**

**Required Reading** Heating, Ventilating and Air Conditioning, Van Nostrand Reinhold;


**Assessment** Assignment 1: based on theoretical aspects of major developments (sketches, max word limit of 3000), 20%; Assignment 2: based on practical aspects of major developments (sketches, max word limit of 3000), 20%; Class Tutorial Exercises (sketches, max word limit of 1500), 10%; three hour Examination, 50%.

**VAA4051 BUILDING QUANTITIES AND COSTS**

**Campus** Footscray Park

**Prerequisite(s)** VAN3052 Engineering Management.

**Content** The project development process, the parties and the trades involved in the process. Bill of Quantities. Quantity surveyor’s role. Introduction to tender rates of the components, measurements of quantities. Estimating principal trades, contractors’ cost estimates and standard method of measurement. Computer applications for estimating process. The feasibility of construction projects. Life cycle costing (LCC) analysis, theory of LCC optimization, practical application of LCC to engineering and mode frequencies and mode shapes.

**Assessment** Assignment 1: fire-safety services investigation (sketches, max word limit of 3000), 20%; Assignment 2: hydraulic design using hyena software (calculations, sketches, max word limit of 3000), 20%; Class Tutorial Exercises (sketches, max word limit of 1500), 10%; three hour Examination, 50%.

**VAA4071 HVAC SYSTEMS 3**

**Campus** Footscray Park

**Prerequisite(s)** VAA3072 HVAC Systems 2.


**Class Contact** three hrs of lectures per week.

**VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2**

**Campus** Footscray Park

**Prerequisite(s)** Nil.


Schematic documentation and detailing specific to high-rise building. Design and construction standards and statutory requirements. Medium-density residential development.

**Required Reading** Australian Building Codes Board (ABCB) (2005), Building Code of Australia (BCA) 2005 Volume One, CanPrint Communications Pty Ltd; Class Notes


**Class Contact** two hrs of lectures and one hr of tutorials per week.

**Assessment** Assignment 1: based on theoretical aspects of major developments (sketches, max word limit of 3000), 20%; Assignment 2: based on practical aspects of major developments (sketches, max word limit of 3000), 20%; Class Tutorial Exercises (sketches, max word limit of 1500), 10%; three hour Examination, 50%.

**VAA4091 STRUCTURAL DYNAMICS 1**

**Campus** Footscray Park

**Prerequisite(s)** RMA 1002 Engineering Mathematics 1B & REP 1003 Engineering Physics 1C.

**Content** Introduction to structural vibrations. Degree of freedom of a system – vibrations of undamped and damped systems, harmonically excited vibration of systems, response systems to harmonically forced excitation, general forcing functions. Eigenvalue for a system, determination of natural frequencies and mode shapes, structural vibration simulation using computer software.


**Class Contact** two hrs of lectures and one hrs of tutorials per week.

**Assessment** Computer based assignment (3000 words equiv.), 25%; Mid-semester test (1 hr), 15%; Tutorial presentation (15 mins), 5%; three hour examination, 60%.

**VAA4092 BUILDING SYSTEMS DESIGN AND CONSTRUCTION**

**Campus** Footscray Park

**Prerequisite(s)** VAA3072 HVAC Systems 2.

**Content** This subject aims to provide students with an overview of key concepts involved in the integration of building services with building structure, during the design and construction stages. Students are exposed, through a range of lectures and site visits, to...
VAC2022 BUILDING CONSTRUCTION
Campus Footscray Park
Prerequisite(s) Nil

Learning Outcomes
Upon successful completion of this subject, students will be able to demonstrate:
- A broad understanding of the types, properties and applicability of materials most commonly used in civil and building engineering construction work.
- A broad knowledge of the type, properties and applications of plant and equipment which could typically be used in a variety of civil and building engineering construction processes.
- A broad knowledge of construction techniques which could be used in a variety of projects.
- An ability to make a reasonable choice of materials, plant, equipment and construction techniques for one or more specific projects.
- An ability, within the context of the subject areas above, to find and use relevant information, to formulate and solve specific problems, to work both autonomously and as a member of a team.

Content
Sand and crushed rock: excavation, drilling, blasting, conveyance, crushing, screening, washing, storing, use. Concrete: constituents, mix design, laboratory tests and standards for strength, workability, etc. cylinders, slump,), properties of fresh and hardened concrete (strength, serviceability, creep, shrinkage, durability), concrete plant arrangements, concrete transport, placing, reinforcement, curing, pumping, spraying, cement grouting. Formwork for concrete. Steel: types and applications, fabrication, painting, coatings and corrosion protection, delivery and erection. Timber: strength and serviceability properties, effects of microstructure and moisture content (hardwoods, softwoods, grain, gum, chemical constituents, etc.), decay / weathering and protection, typical applications, fire resistance. Other materials: overview of properties and applications of masonry, aluminium, glass and selected plastics. Introduction to construction equipment/techniques including use of excavators, dredges, shoring, pumping and dewatering plant, pile drivers, scaffolding and falsework, winches, cranes, cableways and haulage units. Construction sites: site establishment and facilities required, introduction to OHS issues. Many of the topics above will be related to case studies on projects such as buildings, bridges, roads, tunnels and dams.

Required Reading
None Required

Recommended Reading
- Cement & Concrete Association and Standards Australia (2002), Guide to Concrete Construction, CCA and SAA.

VAC2042 HYDRAULICS
Campus Footscray Park
Prerequisite(s) VAN2041 Thermofluids

Content
Fluid resistance and boundary layers; Development of pipe friction equations and their use. Fluid flow through pipelines; inter-reservoir - pipeline flow, branching pipelines, parallel pipelines; Pumps - positive displacement and rotodynamic systems. Pump performance equations, affinity laws and specific speed. Pump selection for particular duties; Flow in open channels - fundamentals (continuity, energy and momentum equations), discharge equations, specific energy and critical depth relationships, flow transitions and Weirs and flumes. Gradually varied flow and surface water profiles. Introduction to unsteady flow condition.

Required Reading

Class Contact
Three hrs of lectures and two hrs of tutorials/labouratory sessions per week.

Assessment
Assignment 1: based on video set on boundary layers (Report, sketches, max word limit of 1500), 10%; Assignment 2: based on self selected site visit in week 9 (Report, photographs, sketches, max word limit of 1500), 10%; Tests (3 x 1hr in wks 4, 7 & 11), 30%; three hour examination, 50%.

VAC2071 SURVEYING
Campus Footscray Park
Prerequisite(s) Nil

Content
Surveying Reference and Basic Computations, Mapping, Vertical Measurement and Note Keeping, Angular Measurement and Note Keeping, Circular Curves, Contours and Contouring, Area Computations for Polygons, Rectangular co-ordinates, Computations for Earth Works, Digital Terrain Models, Geographic Positioning Systems, Victorian Land Title System.

Required Reading
Class Notes

Class Contact
Two hrs of lectures and three hrs of field/tutorials per week.

Assessment
Field work/tutorials 1: Basic Survey Computations (Max. 500 words), 5%; Field work/tutorials 2: Mapping (Max. 500 words), 5%; Field work/tutorials 3: Transferring a level to determine RL of a point (Max. 500 words), 5%; Field work/tutorials 4: Level traverse to determine RL of many points (Max. 500 words), 5%; Field work/tutorials 5: Determining angles in horizontal plane (Max. 500 words), 5%; Field work/tutorials 6: Circular curve set out (Max. 500 words), 5%; Field work/tutorials 7: Grid levelling and contouring (Max. 500 words), 5%; Field work/tutorials 8: Area and perimeter computations using co-ordinates (Max. 500 words), 5%; two hour examination, 60%; Students are required to pass both Field Work and Examination to receive a pass in the subject.

VAC2072 HIGHWAY ENGINEERING
Campus Footscray Park
Prerequisite(s) Nil

Content
Earthworks including equipment, determination of quantities and costs; preparation and use of mass haul diagrams. Route location factors, route selection, horizontal alignment including circular curves and transition curves and superelevation, determination of sight
distance; vertical alignment including grades and vertical curves. Pavement design methods for both flexible and rigid pavements, determination of number of equivalent standard axles, use of California Bearing Ratio. Road construction equipment capabilities. Introducing to road drainage methods, surface and subsurface drainage. Road maintenance issues and programs.

**Required Reading** Austroads (1993), Rural Road Design 7th edn; Class Notes.


**Class Contact** three hrs of lectures and two hrs of tutorials/site visits per week.

**Assessment** Assignment 1: site investigations (1500 words), 10%; Assignment 2: geometric standards and super elevation (Calculations & drawings equivalent to approx. 2000 words), 10%; Assignment 3: pavement design (Calculations & drawings equivalent to approx. 2000 words), 10%; three hour examination, 70%.

---

**VAC3021 STRUCTURAL ANALYSIS**

**Campus** Footscray Park

**Prerequisite(s)** VANC2021 Solid Mechanics 2.

**Content** Virtual Work method of structural analysis: Deflections and rotations of statically determinate trusses, beams and frames; The stiffness method of structural analysis; Solution of redundant beams and frames by equations of slope deflection; The effect of axial force on flexural stiffness; Stiffness analysis using matrices for determinate and indeterminate plane trusses and frames. The flexibility method of structural analysis: Solution of redundant beams and frames. Qualitative and approximate analyses of structures: Use with computer analysis programs to appraise results; Ultimate load (‘plastic’) method of analysis of beams and frames; Frame stability analysis and buckling.


**Class Contact** three hrs of lectures and two hrs of tutorials per week

**Assessment** Stage test: Based on weeks 1-6, 10%; Homework submissions: Based on 5 from 12 weeks, 5%; Assignment 1: Structural model design/making/testing/reporting (3000 words equivalence), 20%; Assignment 2: Computer structural analysis, 15%; three hour examination, 50%.

---

**VAC3031 CIVIL ENGINEERING DESIGN 1**

**Campus** Footscray Park

**Prerequisite(s)** VAC 2072 Highway Engineering, VAC2042 Hydraulics, Corequisite(s) VAC3041 Hydrology and Water Resources.

**Learning Outcomes**

Upon successful completion of this unit, students will have demonstrated:

- an understanding of how to approach a range of simple civil engineering design problems
- ability to perform preliminary designs in a number of civil engineering disciplines
- an ability to evaluate design solutions against a range of technical and other criteria
- a number of generic skills including problem identification / formulation / solution, effective communication, ability to work as a member and/or leader of a small team, ability to use a system approach to design, and capacity to undertake life-long learning.

**Content** This unit of study aims to give students design skills in several areas of civil engineering, and to further develop a range of more generic skills including teamwork and communication. Students will work in small design teams to carry out (typically) four designs drawn mainly from the areas of water and road engineering. Each design will involve analysis, calculations and preparation of engineering drawings. Two designs will have associated with them an individual writing task of approximately 800 words relating to the design. Students must also prepare and deliver one oral presentation on one of the designs or associated written tasks performed during the semester.

---

**VAC3041 HYDROLOGY AND WATER RESOURCES**

**Campus** Footscray Park

**Prerequisite(s)** VAC2042 Hydraulics.

**Learning Outcomes**

Upon successful completion of this unit, students will have demonstrated:

- an ability to apply basic principles of hydraulics and hydrology in a range of water-related projects
- recognition of the importance of social objectives, environmental issues and sustainability concepts in various catchment management and water engineering design projects
- an ability to evaluate solutions against technical, environmental, economic and social criteria.
- an ability to work effectively as a member and/or leader of a team, and to time manage multiple tasks.
- good communication skills, based on technical reports and oral presentations.


**Class Contact** This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group work, team meetings, lectures, workshops, seminars, practical work and site visits. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

**Assessment** Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results and design reports including technical calculations, but may also include a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.
VAC3042 HYDRAULIC ENGINEERING
Campus Footscray Park
Prerequisite(s) VAC 2042 Hydraulics.

Learning Outcomes
Upon successful completion of this unit, students will have demonstrated:

- an understanding of key issues and design principles involved in urban water supply / treatment systems and irrigation works
- an ability to locate and effectively use information / data relevant to these areas
- an ability to identify, formulate and solve related problems, and to carry out associated design work
- an ability to evaluate solutions against technical, environmental, economic and social criteria
- an ability to work effectively as a member and/or leader of a team, and to time manage multiple tasks.
- good communication skills, based on technical reports and oral presentations.

Content
This unit of study aims to give students a basic understanding, problem solving and design skills in the areas of water supply and irrigation engineering. It covers the following topics:

- Urban Water Supply Schemes: Demand assessment and management, supply sources, dam types/spillways/outlet works/construction and safety issues, groundwater development works, water quality requirements and various types of treatment to satisfy these, service storage, pumping stations, reticulation system, arrangements/layout and manual/computer analysis, pipeline design and construction.
- Irrigation: Purpose and principles of irrigation, irrigation water quality, channel design and structures, flood, furrow, sprinkler and trickle irrigation layout and design principles.

Required Reading

Recommended Reading

Class Contact
This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group work, team meetings, lectures, workshops, seminars, practical work and site visits. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment
- Assignment 1: Report based on field investigation of urban water supply systems, max word limit 1500, 40%;
- Assignment 2: Solution of geotechnical problem (calculations, sketches, max word limit 1000), 40%;
- Assignment 3: Solution of geotechnical problems (calculations, sketches, max word limit 1500), 20%;
- 0.5 hr Test On material covered in weeks 1-5, 15%.

VAC3062 GEOTECHNICAL ENGINEERING
Campus Footscray Park
Prerequisite(s) VAC 3061 Geomechanics


Recommended Reading

Class Contact
Three hrs of lectures and two hrs of tutorials/ laboratory work per week

Assessment
Assignment 1: Report based on field investigation of foundations (calculations, sketches, max word limit 2000), 15%;
Assignment 2: Solution of geotechnical problem (calculations, sketches, max word limit 1000), 5%;
Assignment 3: Solution of geotechnical problems (calculations, sketches, max word limit 1500), 10%;
0.5 hr Test On material covered in weeks 1-5, 10%; three hour examination, 60%.

VAC3092 STRUCTURAL DESIGN
Campus Footscray Park
Prerequisite(s) VAN 2032 Engineering Design

Learning Outcome
Upon successful completion of this unit, students will have demonstrated:

- an understanding of key issues and design principles involved in basic structural design using timber, steel and reinforced concrete
- an ability to locate and effectively use information / data relevant to this area.
- an ability to identify, formulate and solve related problems, and to carry out associated design work.
- an ability to evaluate solutions against technical, environmental, economic and social criteria
- an ability to work effectively as a member and/or leader of a team, and to time manage multiple tasks.
- good communication skills, based on technical reports and oral presentations.

Content
This unit of study aims to give students a basic understanding, problem solving and design skills in the areas of structural design using timber, steel and reinforced concrete. It covers the following topics: Dead and live loads. Timber beams and columns. Nailed and bolted connections in steel members. Reinforced concrete design for simple and continuous beams. Beam bending, deflection and shear. Single
and double reinforcement in beams. Reinforced concrete column design.

Required Reading Goren, B. Tinyou, R. and Sayam, A. (1996), Steel Designers Handbook, 7th edition; UNSW Press; AS4100 Steel Structure Code (2002). Standards Association of Australia; Warner, R.F., Rangan, B.V., Hall, A.S. and Faulkes, K.A. (1998) Concrete Structures Longman; AS3600, Concrete Structures Code (2002), Standards Association of Australia; AS1720.1 – 1997, ‘Australian Standard – Timber Structures – Part 1: Design Methods,’ Standards Australia; Class Notes. Recommended Reading Boughton GN (1999), ‘Timber – 8 Hour Introduction to Timber Engineering Resource Pack,’ 2nd edition, published jointly by the National Timber Development Council and Forest and Wood Products Research and Development Corporation. Boughton GN and Crews KI (1998), ‘Timber Design Handbook – in Accordance with the Australian Limit State Timber Design Code, AS1720.1 – 1997,’ Standards Australia. Class Contact This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group work, team meetings, lectures, design workshops, seminars, practical work and site visits. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points. Assessment Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, design assignment / project reports including technical calculations, site visits, a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

VAC4021 STRUCTURAL ENGINEERING ANALYSIS AND DESIGN 1


VAC4022 STRUCTURAL ENGINEERING ANALYSIS AND DESIGN 2
Campus Footscray Park Prerequisite(s) VAC3090 Structural Engineering Analysis & Design 1. Content The analysis topics include the basic concepts of finite element analysis. Element stiffness matrix and mass matrix. Element assembly and solution for unknowns. Analysis of 2D and 2D structures using a commercial finite element analysis package such as STRAND or ANSYS. The design topics commence simply supported beams. Basic methods involving load-balancing, crack control and full prestress. Prestress losses. Transfer. Bending strength. Web and flexural shear. Anchorage zones. Continuous beams both rectangular and I-shaped. Primary and secondary actions. Concordant tendons and transformations. Slab systems.


2 hour examination, 60%; Subject final result derived from weightings = 60% to Design part and 40% to Analysis part.

VAC4032 CIVIL ENGINEERING DESIGN 2
Campus Footscray Park Prerequisite(s) VAC3031 Civil Design 1; VAC3042 Hydraulic Engineering; VAC4071 Transportation Engineering; VAC4081 Environmental Engineering. Content Students will perform five designs of 12 hours each drawn from the areas of drainage, hydraulics, geotechnical engineering and transportation engineering. Each design will have associated with it a writing task on aspects relating to the design. Students must also prepare and deliver one oral presentation on one of the designs performed during the semester. Recommended Reading Class Notes and texts appropriate for each design. Recommended Reading As recommended for each of the subjects on which each design is based. Class Contact one hr of lecture and four hr of seminars/design sessions per week. Assessment Design 1: 18%; Design 2: 18%; Design 3: 18%; Design 4: 18%; Design 5: 18%; Oral presentation, 10%. Each design involves calculations, analysis and preparation of engineering drawings and a separate written report of 800 words.

VAC4071 TRANSPORTATION ENGINEERING
analysis equivalent to approx. 6 pages), 15%; three hour examination, 70%.

VAC4072 ENVIRONMENTAL PLANNING AND DESIGN
Campus Footscray Park
Prerequisite(s) Nil
Content This subject covers areas of sustainable rural and urban land development including biophysical and socio-economic data collection and inventories, environmental sensitivity mapping and land capability analysis, green city/urban forest concepts, planning permit issues and processes including meeting procedure, open space concepts and energy and water conservation, residential subdivisions and appropriate street designs.
Required Reading Victoria, Dept. of Infrastructure, 2001, Victoria Planning Provisions (incorporating Rescode); Class Notes.
Class Contact two hrs of lectures and one hr of tutorials per week.
Assessment Assignment 1: Land development suitability report 1500 words plus sketches, 16%; Assignment 2: Planning meeting report – 1200 words, 10%; Assignment 3: Subdivision and street design calculations and engineering drawing equivalent to approx.12 pages, 24%; 1.5 hour examination, 50%.

VAC4081 ENVIRONMENTAL ENGINEERING 1
Campus Footscray Park
Prerequisite(s) VAC2042 Hydraulics
Class Contact three hrs of lectures and two hrs of tutorials per week.
Assessment Assignment 1: Report based on material covered in weeks 1-5 (calculations, sketches, max word limit 2000), 15%; Assignment 2: Visit report (max word limit 1000), 5%; Assignment 3: Report based on material covered in weeks 6-11 (calculations, sketches, max word limit 1500), 10%; 0.5 hr Test (On material covered in weeks 1-6), 10%; three hour examination, 60%.

VAC4082 ENVIRONMENTAL ENGINEERING 2
Campus Footscray Park
Prerequisite(s) Nil
Required Reading Class Notes.
Class Contact three hrs of lectures and two hrs of tutorials per week.
Assessment Assignment 1: Report based on material covered in weeks 3-6 (calculations, sketches, max word limit 1500), 10%; Assignment 2: Report based on material covered in weeks 7-9 (calculations, sketches, max word limit 1500), 10%; Assignment 3: Site visit report (max word limit 1500), 10%; 0.5 hr Test (On material covered in weeks 1-6), 10%; three hour examination, 60%.

VAC4091 STRUCTURAL ENGINEERING DESIGN 1
Campus Footscray Park
Prerequisite(s) VAC3092 Structural Design.
Class Contact two hrs of lectures and one hr of tutorials per week.
Assessment three hour mid-semester supervised assignment (This assessment will be largely open-book), 40%; two hour examination, 60%.

VAC4092 STRUCTURAL ENGINEERING DESIGN 2
Campus Footscray Park
Prerequisite(s) VAC4091 Structural Engineering Design 1.
Class Contact two hrs of lectures and one hr of tutorials per week.
Assessment three hour mid-semester supervised assignment. This assessment will be largely open-book. (Calculations, sketches, max word limit of 1500), 40%; two hour examination, 60%.

VAM2011 COMPUTATIONS AND ENGINEERING ANALYSIS
Campus Footscray Park
Prerequisite(s) RMA1002 Engineering Mathematics 1A, and VAN1011 Experimentation and Computing.

**Required Reading**


**Recommended Reading**


**Class Contact**

60 hours in one semester comprising lectures/tutorials/computer laboratory

**Assessment**

Computing test 1: two hours based on weeks 1–5, 30%.
Computing test 2: two hours based on weeks 7–11, 30%; Theory test – two hours, 30%; On-going lab assignments (Word limit of 1000), 10%

**VAM2042 THERMODYNAMICS AND FLUID MECHANICS 1**

**Campus Footscray Park**

**Prerequisite(s)**

VAN2041 Thermofluids

**Content**


**Required Reading**

Comprehensive class, laboratory and activity notes.


**Recommended Reading**


**Class Contact**

three hrs of lectures and two hrs of tutorial/laboratory sessions per week.

**Assessment**

Class Test: based on weeks 1–6 (calculations, sketches, max word limit of 1000 words), 10%; Class Test: based on weeks 6–12 (calculations, sketches, max word limit of 1000 words), 10%; Assessment 3: Lab on Venture tube (calculations, sketches, max word limit of 1000 words), 10%; Assessment 4: Lab on refrigeration unit (calculations, sketches, max word limit of 1000 words), 10%; Final Exam: 3hrs, 60%.

**VAM2062 MATERIALS AND MANUFACTURE**

**Campus Footscray Park**

**Prerequisite(s)**

VAN2061 Engineering Materials.

**Learning Outcomes**

Upon successful completion of this subject, students will be able to demonstrate

- an understanding of processes and key issues related to engineering science in manufacturing and environment.
- an ability to solve a range of numerical engineering problems found in engineering practice and engineering design.
- an ability, within the context of the subject areas above, to find and use relevant information, to formulate and solve specific problems, to work both autonomously and as a member of a team, and to effectively communicate ideas, issues, investigations and results by a variety of methods.

**Content**


**SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING**

**Required Reading**

- Rojter, J. (2005), Structure and Mechanical Properties of Solids1, Victoria University. Class Notes
- Rojter, J. (2005), Manufacturing Materials: Part 1, Victoria University. Class Notes
- Kalpakjian, S. (2002), Manufacturing Engineering and Technology, Addison- Wesley
- **Recommended Reading**

**Class Contact**

5 hrs equivalent per week of sessions made up of small group work, team meetings, workshops, seminars and laboratory sessions. In addition, students are expected to devote at least this much time for private study and group study.

**Assessment**

An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, laboratory reports, site visit / project reports, reflective journals, workbooks, self and peer assessment.

**VAM3012 SIGNAL ANALYSIS**

**Campus Footscray Park**

**Prerequisite(s)**

VAM2011 Computation and Engineering Analysis.

**Learning Outcomes**

Upon successful completion of this unit, students will have:

- developed an understanding of processes and key issues related to modern measurement and signal analysis principles and techniques relating to mechanical engineering practice.
- demonstrated an ability to solve a wide range of problems and carry out design tasks pertaining to sensor selection and evaluation, and develop computer algorithms for a wide range of signal analysis techniques in the time and the frequency domains.
- completed work designed to improve a number of generic skills including problem identification / formulation / solution, effective oral and written communication, experimental techniques, computer skills and the ability to use a systematic approach to engineering investigation and algorithm development, as well as a capacity to undertake life-long learning.

**Content**

This unit of study aims to give students an understanding of the principles of modern signal measurement and analysis with applications to mechanical engineering. It relies heavily on the development of computer algorithms and the use of specialist engineering software, and covers the following topics. Engineering measurement theory and fundamentals. Instrumentation and sensors for mechanical processes. Dynamic response of measurement systems. Data acquisition systems: analogue-to-digital converters, quantisation. Shannon's sampling theorem. Anti-aliasing filters. Use of data acquisition and analysis software: Matlab®, MATLAB, HPVee®, DataTarger. Signal classification: Static, transient and dynamic signals, deterministic signals, random signals, non-stationary signals. Analysis and interpretation of digital experimental data: Time domain analysis: trends, RMS, moving statistics (mean, RMS), synchronous averaging, transient (shock) signals, probability distribution statistical estimates. Frequency domain analysis: Fast Fourier Transform (FFT), frequency spectra, spectrum types and scaling. Frequency response functions, coherence, signal-to-noise ratio. Introduction to wavelet transforms. The projects involve applications such as shocks and vibrations, noise contaminated signals, acoustic signals and other physical phenomena relating to modern mechanical engineering.

**Required Reading**

FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Scientific & Technical, Harlow U.K.; Matlab Online Reference Manuals; Class Notes.

Recommended Reading

Class Contact
This unit will be delivered in PBL mode and based on up to three projects to be undertaken by students working in teams. It will comprise 60 hours (5 hours equivalent per week) of lectures, tutorials, laboratory/workshop, workshops and small group project work. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment
Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment / project reports including technical calculations, laboratory reports, a reflective journal, workbook(s), and self and peer assessment Further details on portfolio components will be issued to students during the first week of classes.

VAM3021 STRESS ANALYSIS 1
Campus: Footscray Park
Prerequisite(s): VAM2031 Solid Mechanics 2.

Content

Required Reading
Lecture Notes by Danh Tran.


Class Contact
three hrs of lectures and two hrs of tutorials per week.

Assessment
Laboratory 1: three hour on Strain Gauge, report 2000-3000 words, 10%; Laboratory 2: three hour Photoelasticity, report 2000-3000 words, 10%; Test 1: based on Week 1-4, open book, one hour, 10%; Test 2: based on Week 6-8, open book, one hour, 10%; Examination: three hour (open book), 60%.

VAM3022 STRESS ANALYSIS 2
Campus: Footscray Park
Prerequisite(s): VAM3021 Stress Analysis 1.

Content

Required Reading
Lecture Notes by Danh Tran.


Class Contact
five hrs of lectures and two hrs of tutorials per week. Including Finite Element computer based laboratory using a finite element software.

Assessment
Assignment 1: Truss analysis by Solid Mechanics and Finite Element, 1500-2000 words, 10%; Assignment 2: Stress analysis by ANSYS, 1500-2000 words, 10%; Test 1: based on Week 1-4, open book one hour, 10%; Test 2: based on Week 5-8, open book, one hour, 10%; Examination: three hour, open book, 60%.

VAM3031 MECHANICAL ENGINEERING DESIGN 1
Campus: Footscray Park
Prerequisite(s): VAM2032 Engineering Design.

Learning Outcomes
Upon successful completion of this unit, students will have demonstrated:
- significant knowledge and competence in the application of fundamental mechanics and scientific skills to design and selection of mechanical elements.
- development of skills to identify, formulate and solve engineering design problems in a systematic way.
- an ability to use computing methods to solve mechanical engineering design problems.
- ability to work effectively as a member and/or leader of a team and to time manage multiple tasks.
- ability to use mechanical engineering design skills to solve a plant design problem experienced in industry.

Content
This unit of study aims to give students broad skills in designing a range of machine elements and more integrated plant used in mechanical engineering systems. It covers the following topics: Design of mechanical elements: Design of Power Screws and fasteners. Design of power transmission shafting, gears, cams and followers, Design and selection of rolling contact and journal bearings, Selection of chain drives, belt drives, clutches and couplings. Design of plant equipment: Machine Design, Design of Conveyors, Fan Duct systems, Piping systems. Pipe Flexibility. Programming for the design of mechanical elements and plant Design. Solids modelling of mechanical elements.

Required Reading

Recommended Reading

VAM3041 THERMODYNAMICS AND FLUID MECHANICS 2
Campus: Footscray Park
Prerequisite(s): VAM2042 Thermodynamics and Fluid Mechanics 1.

Content

Required Reading
Lecture Notes, laboratory and activity notes.


Recommended Reading

Class Contact
three hrs of lectures and two hrs of tutorial/laboratory sessions per week.

Assessment
Class Test: based on weeks 1- 6 (calculations, sketches, max word limit of 1000 words), 10%; Class Test: based on weeks 6- 12 (calculations, sketches, max word limit of 1000 words), 10%; Assessment 3: Lab on external flows (calculations, sketches, max word limit of 1000 words), 10%; Assessment 4: Lab on Engine (calculations, sketches, max word limit of 1000 words), 10%; Final Exam: 3hrs, 60%.

VAM3071 DYNAMICS
Campus: Footscray Park
Prerequisite(s): RMA1002 Engineering Mathematics 1B and REP1003 Engineering Physics 1C.

Learning Outcomes
Upon successful completion of this unit, students will have developed an understanding of processes and key issues related to particle dynamics and rigid body dynamics in two and three- dimensional space.
- demonstrated an ability to solve a wide range of numerical problems and carry out design tasks on kinematics of particles,
plane kinematics of rigid bodies, kinetics of particles, plane kinetics of rigid bodies and three-dimensional kinematics and kinetics of rigid bodies.

• completed work designed to improve a number of generic skills including problem identification / formulation / solution, effective oral and written communication, experimental techniques, computer skills and the ability to use a systematic approach to design, and a capacity to undertake life-long learning.

Content This unit of study aims to give students an understanding of principles of engineering dynamics including particle dynamics and rigid body dynamics (kinematics and kinetics) in two and three dimensional space, as well as to develop problem solving, computing and design skills in the areas of mechanism design and analysis. It covers the following topics. Introduction to dynamics, Kinematics of particles – rectilinear and plane curvilinear motion co-ordinates systems, 3-D curluvilinear motion and relative velocity, instantaneous centre of zero velocity, relative acceleration, space curvilinear motion. Kinetics of particles – Newton's law, work and energy, impulse and momentum. Plane kinematics of rigid bodies – moments and products of inertia, Newton's law, work and energy, impulse and momentum. Three-dimensional dynamics of rigid bodies – kinematics, kinetics, gyroscopic motion.

Required Reading

Recommended Reading

Class Contact This unit will be delivered in PBL mode, and will comprise 60 hours (5 hours equivalent per week) of sessions made up of small group work, team meetings, lectures, workshops, seminars and laboratory work. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment / project reports including technical calculations, laboratory reports, a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

VAM3072 MECHANICAL VIBRATIONS

Campus Footscray Park
Prerequisite(s) RMA1002 Engineering Mathematics 1B and REP1003 Engineering Physics 1C.

Learning Outcomes
Upon successful completion of this unit, students will have demonstrated:

• an understanding of key issues involved in the vibratory analysis of mechanical systems.
• an ability to identify, formulate and solve related problems, and to carry out associated design work.
• an ability to evaluate solutions against technical, environmental, economic and social criteria.
• an ability to work effectively as a member and/or leader of a team, and to time manage multi tasks.
• good communication skills, based on technical reports, discussions and debates.

Content
This unit of study aims to give students a basic understanding of problem solving and design skills in Mechanical Vibrations. It covers the following topics: introduction to mechanical vibrations and vibratory elements; Single Degree of Freedom Systems – free vibrations of undamped systems, free vibrations with viscous, coulomb and hysteretic damping, harmonically excited vibrations of undamped systems, response of damped systems to harmonically forced excitation and base motion, response of damped systems, Two Degree of Freedom Systems – free vibrations of undamped systems, co-ordinate coupling, forced vibrations; Multi Degree of Freedom Systems – influence coefficients, Eigenvalue problem, determination of natural frequencies and mode shapes; vibration measurement, vibration control, random vibration analysis, random vibration simulation.

Required Reading

Recommended Reading

Class Contact
This unit will be delivered in PBL mode and based on up to three projects to be undertaken by students working in teams. It will comprise 60 hours (5 hours equivalent per week) of lectures, tutorials, laboratory/field work, workshops and small group project work. In addition, students are expected to devote at least the same amount of time for private and/or group study. The unit is worth 12 credit points.

Assessment
Based 100% on an individual portfolio which documents evidence that the learning outcomes have been achieved. The portfolio may include skills audit results, assignment / project reports including technical calculations, laboratory reports, a reflective journal, workbook(s), and self and peer assessment. Further details on portfolio components will be issued to students during the first week of classes.

VAM4021 COMPUTATIONAL MECHANICS

Campus Footscray Park
Prerequisite(s) VAM3022 Stress Analysis 2, VAM3072 Mechanical Vibrations.

Content

Required Reading
Lecture Notes.

Recommended Reading

Class Contact
5 hrs of lectures and tutorials per week for 12 weeks, including computer based laboratory using software.

Assessment

VAM4032 MECHANICAL ENGINEERING DESIGN 2

Campus Footscray Park
Prerequisite(s) VAM3031 Mechanical Engineering Design 1.

Content

Required Reading
Lecture notes.

Recommended Reading

Class Contact
2-3 hrs of lectures and 3-2 hrs of tutorials per week.

Assessment
Substantial assignments/projects based on theory (sketches, graphs, tables, descriptions; word limit 500-1000), 20%; Mid-semester test, 30%; three hour examination, 50%.

VAM4041 HEAT TRANSFER AND COMBUSTION

Campus Footscray Park
Prerequisite(s) VAM4031 Thermodynamics and Fluid Mechanics 1.

Content
Conduction; Radiation; Natural and Forced Convection; Extended surfaces, one-dimensional and two-dimensional steady state conduction, transient heat conduction, charts for transient heat conduction. Numerical solution of heat transfers. Finite difference representation.

Class Contact
Convection: thermal boundary layer, laminar flow, Reynolds analogy, heat transfer in turbulent boundary layers. Forced convection inside


**Required Reading**

**Recommended Reading**

**Class Contact**
three hrs of lectures and two hrs of tutorials per week.

**Assessment**
Assignment 1: based on weeks 1-6 (maximum 1500 words), 10%; Assignment 2: based on weeks 7-12 (maximum 1500 words), 10%; Test 1: based on weeks 1-6, 10%; Test 2: based on weeks 7-12, 10%; Laboratory Program: based on weeks 1-10, 10%; three hour examination, 50%.

**VAM4042 FLUID DYNAMICS**
Campus Footscray Park
**Prerequisite(s)**
VAM3041 Thermodynamics and Fluid Mechanics 2.

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
two hrs of lectures and three hrs of tutorials per week.

**Assessment**
Assignment 1: based on weeks 1-3, 15%; Assignment 2: based on weeks 4-9, 15%; Assignment 3: based on weeks 7-8, 20%; Assignment 4: based on weeks 7-12, 20%; Assignment 5: based on weeks 7-12, 30%.

The assessment tasks will demonstrate that students are capable of presenting sustained intellectual arguments. Some of the arguments will be mathematically complex, but illustrative of the narratives. It is expected that the written work will be based on rational argument and will not be based on dubious ways of knowing and epistemologies. It is anticipated that students will be able to celebrate the achievements of some students using an alternative assessment method over primitive myths. Each assessment task will be anticipated that students will be able to celebrate the achievements of some students using an alternative assessment method over primitive myths.

**Recommended Reading**

**Class Contact**
four hrs of lectures (common tutorials, site visits) and one hr of tutorials and laboratory classes per week.

**Assessment**
Test 1 in week 5, 10%; Test 2 in week 11, 10%; Laboratory Reports and Assignments. Students are required to achieve a minimum of 40% in these assessment tasks to successfully complete the subject.

Assignments and laboratory reports have a limit of 2500 words (excluding diagrams, graphs, appendices and bibliography), 25%; three hour examination, 55%.

**VAM4072 ADVANCED MECHANICS**
Campus Footscray Park
**Prerequisite(s)**
VAM4021 Computational Mechanics.

**Content**


**Required Reading**
Lecture notes.

**Recommended Reading**

**Class Contact**
five hrs of lectures and tutorials per week for 12 weeks, including experiments and computer-based laboratory.

**Assessment**

**VAM4082 AUTOMOTIVE ENGINES, ENERGY AND ENVIRONMENT**
Campus Footscray Park
**Prerequisite(s)**
VAM3041 Thermodynamics.

**Content**
Engine types and their operation, Engine design and operational parameters, Engine dynamics, Engine testing and control.

**Required Reading**

**Recommended Reading**

**VAM4092 TRANSPORTATION AND PACKAGING DYNAMICS**

**Campus** Footscray Park

**Prerequisite(s)** VAM3972 Mechanical Vibrations

**Learning Outcomes** Upon satisfactory completion of the subjects students should have a good understanding of key principles underpinning the design of protective packaging for transportation, be familiar with experimental techniques relevant to performance testing of packaging and be equipped with specialist knowledge relevant to seeking employment in this field.

**Content**
- Shock and vibration in transportation environment.
- Characterisation of packaging materials relevant to their protective functions. Principles of design of a product/package system.
- Performance testing of shipping containers and units. International standards for performance testing of shipping containers and units (ASTM, ISTA, ISO). Testing protocols. Equipment for implementation of performance testing

**Required Reading**
- ASTM Standards

**Recommended Reading**

**Class Contact** 60 hours in one semester comprising lectures, tutorials and practical laboratory sessions.

**Assessment**
- Test 1: based on weeks 1-6 (calculation, sketch and maximum 1500 words), 15%; Test 2: based on weeks 6-12 (calculation, sketch and maximum 2000 words), 20%; Final Exam: three hours, 50%.

**VAN1022 SOLID MECHANICS 1**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Learning Outcomes** Upon successful completion of this subject, students will:
- have developed an understanding of forces and moments.
- be able to use Free Body Diagrams and equilibrium equations to determine forces and reactions of simple structural systems such as two-dimensional trusses and beams.
- have developed an understanding of sectional properties, of stress and strain, and of bending and shear stresses in beams.
- be able to think independently and develop and exercise imagination and insight to solve statically a given structure.
- have demonstrated an ability to work effectively as a member of a team, to write technical reports and to manage time effectively.
- be able to use the knowledge obtained from this subject to undertake later engineering subjects.

**Content**
- Concept of force. Equilibrium of coplanar forces. Resultant forces, components of forces.
- Levers and moments. 2D statical equilibrium. Free body force diagrams.
- Pin jointed trusses.
- Beams, loads and reactions. Internal forces in beams. Bending moment and shearing force diagrams for beams.
- 3D statical equilibrium.

**Required Reading**

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week made up of a mix of small group work, lectures, and workshops. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING

- have acquired skills in the analysis, simulation and presentation of engineering data measured in the laboratory, using computing techniques.
- be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.

**Content**
- Experimentation and measurement: The use of instrumentation, laboratory and technical procedures, work-place safety requirements, report writing and oral presentation.
- Data analysis and presentation: Algorithm development, introduction to Data types, Data file reading and writing, Graphing and analysis of experimental data, curve fitting, Statistical and error analysis of experimental data, Solutions of equations.

**Required Reading**
- Comprehensive project, laboratory and activity notes. On-line material.

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week of sessions made up of small group project work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

**VAN1011 EXPERIMENTATION AND COMPUTING**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Learning Outcomes** Upon successful completion of this subject students will:
- be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.

**Content**
- Experimentation and measurement: The use of instrumentation, laboratory and technical procedures, work-place safety requirements, report writing and oral presentation.
- Data analysis and presentation: Algorithm development, introduction to Data types, Data file reading and writing, Graphing and analysis of experimental data, curve fitting, Statistical and error analysis of experimental data, Solutions of equations.

**Required Reading**
- Comprehensive project, laboratory and activity notes. On-line material.

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week of sessions made up of small group project work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING

- have acquired skills in the analysis, simulation and presentation of engineering data measured in the laboratory, using computing techniques.
- be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.

**Content**
- Experimentation and measurement: The use of instrumentation, laboratory and technical procedures, work-place safety requirements, report writing and oral presentation.
- Data analysis and presentation: Algorithm development, introduction to Data types, Data file reading and writing, Graphing and analysis of experimental data, curve fitting, Statistical and error analysis of experimental data, Solutions of equations.

**Required Reading**
- Comprehensive project, laboratory and activity notes. On-line material.

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week of sessions made up of small group project work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

**VAN1011 EXPERIMENTATION AND COMPUTING**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Learning Outcomes** Upon successful completion of this subject students will:
- be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.

**Content**
- Experimentation and measurement: The use of instrumentation, laboratory and technical procedures, work-place safety requirements, report writing and oral presentation.
- Data analysis and presentation: Algorithm development, introduction to Data types, Data file reading and writing, Graphing and analysis of experimental data, curve fitting, Statistical and error analysis of experimental data, Solutions of equations.

**Required Reading**
- Comprehensive project, laboratory and activity notes. On-line material.

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week of sessions made up of small group project work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

SCHOOL OF ARCHITECTURAL, CIVIL AND MECHANICAL ENGINEERING

- have acquired skills in the analysis, simulation and presentation of engineering data measured in the laboratory, using computing techniques.
- be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.

**Content**
- Experimentation and measurement: The use of instrumentation, laboratory and technical procedures, work-place safety requirements, report writing and oral presentation.
- Data analysis and presentation: Algorithm development, introduction to Data types, Data file reading and writing, Graphing and analysis of experimental data, curve fitting, Statistical and error analysis of experimental data, Solutions of equations.

**Required Reading**
- Comprehensive project, laboratory and activity notes. On-line material.

**Recommended Reading**

**Class Contact** 5 hrs equivalent per week of sessions made up of small group project work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.

**Assessment**
- An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

VAN1032 INTRODUCTION TO DESIGN
Campus Footscray Park
Prerequisite(s) Nil.
Learning Outcomes Upon successful completion of this subject, students will:
• be able to identify apparent and real design problems and identify alternatives for a given design problem
• be able to evaluate various alternatives against various design criteria, such as environmental, economical, technical, human and legal
• be able to think independently and develop and exercise imagination and insight to solve a given engineering project
• have demonstrated an ability to work effectively as a member of a team, to write technical reports and to manage multiple tasks
• have a sound understanding of graphic procedures appropriate to Engineering design and achieved a basic level of engineering graphic skills
• have demonstrated an appropriate level of professional written and oral communication skills
• be able to prepare and use computer generated drawings as a means of communicating Engineering design to others
• be able to use the knowledge gained from this subject to conduct effective project-based, laboratory and measurement activities and report presentations for subjects at higher years of the course.
Content
• the design process and the history of Engineering design
• creative thinking in design, generating and evaluating design alternatives
• technical, environmental, human, economic, legal criteria for evaluation of design alternatives
• making the final decision in design
• professional Engineering drawing practice, projections and views, dimensioning, layout, assembly, detailed drawings and sketching
• computer generated drawings utilizing the commercial industry standard software AutoCAD.
• Required Reading
  • Fogler, H.S. and LeBlanc, S.E., 1995, Strategies for Creative Problem Solving, Prentice Hall PTR.
• Recommended Reading
Class Contact
5 hrs equivalent per week made up of small group work, team meetings, workshops, seminars and presentations. In addition, students are expected to devote at least this much time for private and/or group study.
Assessment An individual portfolio which provides documented evidence demonstrating that the learning outcomes for the subject have been achieved. The portfolio will include skills audits, design project reports, design drawings and models, reflective journals, design notebooks, self and peer assessment, oral presentations.

VAN1051 ENGINEERING PROFESSION
Campus Footscray Park
Prerequisite(s) Nil.
Learning Outcomes Upon successful completion of this subject, students will:
• be able to make effective oral presentations;
• be able to produce written text in a variety of genres
• be able to articulate at a fundamental level the “language of engineering”;
• have developed independent, self reflective learning and evaluation skills;
• have developed an understanding of the importance of science and engineering in a civilised society;
• have demonstrated a knowledge of appropriate ethical behaviour in professional engineers;
• be able to research and analyse engineering problems and identify a range of appropriate solutions;
• be able to demonstrate an understanding of environmental issues and sustainable development;
• be able to demonstrate an ability to work effectively as a member of a team and to manage multiple tasks;
• be able to demonstrate time management skills to complete a project in a specified time.
Content
This subject gives students an understanding of how society has developed as a result of science and engineering, exploring the need for and the responsibilities of the professional engineer. Professional written and oral communication skills, time management and teamwork skills, self reflection and evaluation skills will be developed in the context of engineering issues. Topics considered include the role of an engineer, ethics, approaches to problem solving and design, the environment and sustainable development. Content is divided equally between consideration of these engineering issues and the development of written and oral communication skills.
Required Reading
Engineering in Society 2006, Class Notes.
VU, Faculty of Arts 2006, Handbook of Communication Skills for first year students in the Faculty of Science, Engineering and Technology, 7th edn.
Recommended Reading
Class Contact
5 hrs equivalent per week of sessions made up of small group work, team meetings, workshops, seminars and site visits. In addition, students are expected to devote at least this much time for private and/or group study.
Assessment
An individual portfolio which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports, reflective journals, workbooks, self and peer assessment.

VAN2021 SOLID MECHANICS 2
Campus Footscray Park
Prerequisite(s) VAN1022 Solid Mechanics 1
Learning Outcomes Upon successful completion of this subject, students will be able to demonstrate:
• An understanding of and an ability to calculate the deflection of beams.
• Familiarity with failure modes of compression members.
• An understanding of the concepts of principal stress and Mohr’s circle.
• An understanding of twist and torsion in structures, and an ability to determine shear stress and angle of twist in simple structures.
Content
• Properties of sections, including area, centroids, first and second ‘moments’ of area.
• Polar moment of area. Principal axes of sections. Parallel axis theorem.
• Deflection of simple determinate beams. Deflections by Macaulay’s method and superposition.
• Failure modes and loads for compression members, includes squashing / elastic buckling and combined effect of direct and bending stresses.
• Stresses and strains in two dimensions, Mohr’s circle, principal stress.
• Elastic bending stresses and shear stress distribution in beams.
• Unsymmetrical bending. Shear centre. Principal axes.
• Torsion in solid and thin-wall tubes. Open and closed sections.
• Simple frames under bending.
Required Reading
• University, “WebCT” web site for this subject.
Recommended Reading
Class Contact
5 hrs equivalent per week made up of a mix of small group work, lectures, and workshops. In addition, students are expected to devote at least this much time for private and/or group study.
Assessment
An individual portfolio which provides documented evidence demonstrating that the learning outcomes for the subject have been achieved. The portfolio will include two major parts: a skills audit and an assignment set which includes structural model making, drawings and project reports.
VAN2032 ENGINEERING DESIGN

Campus: Footscray Park

Prerequisite(s): VAN 1022 Solid Mechanics 1

Learning Outcomes: Upon successful completion of this subject, students will be able to demonstrate:

- An understanding of the concepts for static and dynamic and structural actions.
- The ability to apply concepts in the appropriate determination of design loads to an introductory level.
- The ability to apply concepts in the design of simple structural and mechanical elements.
- The ability to critically evaluate the sensitivity of design outcomes.
- The ability to present design outcomes in a professional manner.
- The ability within the context of the subject areas, to formulate and solve specific design problems.
- The ability to work both autonomously and as a member of a team, and effectively communicate design investigations by a variety of means.

Content: The structural design covers: Static dead and live loads, The fundamental rationale in choosing design loads and the calculation of specific loads. Design of simple structural steel beams and columns. Design of bolted and welded connections in simple shear or tension. The mechanical design covers: Design uncertainties and reliability, Theories of Static Failure, Low and High cycle fatigue failure, Linear and torsional impact failure. Many of the topics related to case studies such as building components and mechanical elements.

Required Reading: None required.


Class Contact: Required Reading: Comprehensive class, laboratory and activity notes. Recommended Reading: Class Notes.

Assessment: Content: The assessment includes assignments, tests, and a final examination. Required Reading: Assessed through participation in class discussions and completion of assignments.

VAN2041 THERMOFLUIDS

Campus: Footscray Park

Prerequisite(s): REP 1002, RMA 1002


Recommended Reading: None required.

Class Contact: Required Reading: Class Notes.

Assessment: Class Test: based on weeks 1-6 (calculations, sketches, max word limit of 1000 words), 10%; Class Test: based on weeks 6-12 (calculations, sketches, max word limit of 1000 words), 10%; Assessment 3: Lab on stability of floating body (calculations, sketches, max word limit of 1000 words), 10%; Assessment 4: Lab on Tube and Shell heat exchanger (calculations, sketches, max word limit of 1000 words), 10%; Final Exam: 3hrs, 60%.

VAN2064 ENGINEERING MATERIALS

Campus: Footscray Park

Prerequisite(s): VAN 1022 Solid Mechanics 1 and REP 1001 Engineering Physics 1A.

Learning Outcomes: Upon successful completion of this subject, students will be able to demonstrate:

- An understanding of processes and key issues related to engineering science in manufacturing and environment.
- An ability to solve a range of numerical engineering problems found in engineering practice and engineering design.
- An ability, within the context of the subject areas above, to find and use relevant information, to formulate and solve specific problems, to work both autonomously and as a member of a team, to effectively communicate ideas, issues, investigations and results by a variety of methods, and to work in culturally diverse settings.


Required Reading: Recommended Reading: • Gorot, J. (2005), Fundamental Applications of Science to Materials Technology, Victoria University. • Class Notes.


Assessment: Individual portfolio, which provides evidence that demonstrates that the learning outcomes have been achieved. The portfolio may include skills audits, project reports including technical calculations, reflective journals, workbooks, self and peer assessment.

VAN3052 ENGINEERING MANAGEMENT

Campus: Footscray Park

Prerequisite(s): Nil


VAN4011 ENGINEERING PROJECT 1
Campus Footscray Park
Prerequisite(s) Completion of all subject prescribed in Year 3
Content This subject constitutes a major capstone task for the engineering courses listed above, and provides students with the opportunity to integrate and further develop a range of technical and generic skills acquired in earlier course years. It will typically involve: preliminary investigation and follow-up explicit formulation of an engineering related problem, review of relevant literature and/or discussion with a range of stakeholders, critical analysis of the problem, development/testing of a range of possible alternative solutions, and evaluation of these against social, environmental and economic criteria prior to selection of a ‘best’ solution. This project will normally be continued in VAN4012, semester 2. Students are also required to undertake a number of activities relating to improvement in communication skills, resume preparation, job application, and development of good interview techniques.
Required Reading Lecture and class notes
Recommended Reading To be advised by the project supervisor
Class Contact one hr of lecture/discussion and three hrs of tutorials/project work per week
Assessment Project Report (approximately 30 pages), 50%; Professional Employment Application, 20%; Mock Interview, 10%; Oral Presentation, 20%.

VAN4012 ENGINEERING PROJECT 2
Campus Footscray Park
Prerequisite(s) Satisfactory completion of VAN4011 Engineering Project 1
Content This subject constitutes a major capstone task for the engineering courses listed above, and provides students with the opportunity to integrate and further develop a range of technical and generic skills acquired in earlier course years. It will typically involve: preliminary investigation and follow-up explicit formulation of an engineering related problem, review of relevant literature and/or discussion with a range of stakeholders, critical analysis of the problem, development/testing of a range of possible alternative solutions, and evaluation of these against social, environmental and economic criteria prior to selection of a ‘best’ solution. (The project work undertaken here will normally be a continuation of that carried out in VAN4011.)
Required Reading Lecture and class notes
Recommended Reading To be advised by the project supervisor, and relevant to the specific project undertaken.
Class Contact one hr of lecture/discussion and three hrs of tutorials/project work per week.
Assessment Final Project Report (approximately 70 pages – will typically incorporate some material from VAN4011 project report), 70%; Poster Presentation, 10%; Oral Presentation, 20%.

VAN4051 ENGINEERING PROJECT MANAGEMENT
Campus Footscray Park
Prerequisite(s) VAN3052 Engineering Management
Content The role of engineering project management in the industry. Tendering process, strategies and practices. Forms of construction contracts. Contract administration phases. Cost management system for the progressive cost control of a project. Plan site administration of medium sized projects. Financial feasibility for long-term development projects. Break-even analysis, engineering project evaluation, and preparation of project cash flow budgeting, current construction industry practices. Understand various forms of project delivery methods. Developing quality management system. Developing quality assurance process; measuring process performance; feedback and corrective action; responding to external changes; alternative approaches to total quality management; Identifying the required resources – in terms of human, machines and materials; understanding the need vs. wants; selecting and apportioning in a resource limited situation; managing through people; motivation; use of power; management styles; effective project communication; Non adversarial approach to people management; role of unions and employer organisations in engineering industry; legal aspects relating to contracts, responsibility and liability of a manager running a small engineering company.
Required Reading C. Bhula and V. Sarma, Lecture Notes
Class Contact three hrs of lectures; one hr of tutorial and one hr of computer laboratory per week
Assessment Assignment 1: based on weeks 1-6 (sketches, descriptions, max word limit of 1500), 12.5%; Assignment 2: based on weeks 7-11 (sketches, descriptions, max word limit of 1500), 12.5%; Assignment 3: Use of application softwares, 15%; three hour examination, 60%.

VAR2001 MECHATRONICS 1
Campus Footscray Park
Prerequisite(s) VAR1001 Robotics 1.
Content Co-ordinate and measurement systems, actuator and control systems, application of kinematics and dynamic concepts, trajectory planning and control, electronic and mechanical devices, sensors and instrumentations, application of power motors, actuators and transmission devices.
Class Contact three hrs of lectures and two hrs of tutorials per week.
Assessment Laboratory report #1, 5%; Laboratory report #2, 5%; Laboratory report #3, 5%; Assignment (maximum 1500 words), 10%; Mid-semester test, 10%; Tutorial presentation, 5%; three hour examination, 60%.

VCC8001 RESEARCH THESIS FULL TIME
Campus Footscray Park
Prerequisite(s) Nil.
Content The subject will enable students to: identify a research problem and critically review the relevant literature; determine appropriate methods to study the problem; collect, and analyse data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically review the processes undertaken and make recommendations for future research and for practice; present the results of the research undertaken, both clearly and accurately in a written thesis. The research topic chosen will allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. The thesis will normally be from 15,000 to 25,000 words. It will report on independently conducted research which demonstrates the student’s ability to clearly define a problem, to undertake a detailed literature search and review the literature on the topic area. The student shall also demonstrate both the ability to develop and/or apply models to study the problem and good data selection, collection and analysis skills. Students will normally be supervised by an academic member of the Department of Civil and Building Engineering and by a joint supervisor external to the Department. The external supervisor will be an academic from another Department of Victoria University or from another institution or an industry practitioner.
Required Reading To be advised by lecturer.
Class Contact Twelve hours per week for one semester.
Assessment Before commencing actual research, students must complete, to the satisfaction of the research supervisor, a paper critically reviewing the literature and providing a clear outline of the proposed research methodology to complete the thesis. The final thesis will be assessed by two examiners with expertise in the area of the research. These examiners may be internal or external to the Department or the institution and will not include the supervisors.
Students may be asked to present themselves for oral or written examination by these examiners, at the examiners’ discretion. Each examiner will independently recommend one of the following outcomes to the School’s Research and Graduate Studies Committee: (a) pass without further examination; (b) pass, subject to corrections to the satisfaction of the Department’s Research and Graduate Studies Committee; (c) candidate to pass a written or oral examination to pass thesis; (d) deferred for resubmission after major revision; (e) fail. In the event that there is disagreement between the examiners, a third examiner will be appointed.

VCC8002 RESEARCH THESIS FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VCC8011 RESEARCH THESIS (PART-TIME)
Campus Footscray Park
Prerequisite(s) Nil.
Content The subject will enable students to: identify a research problem and critically review the relevant literature; determine appropriate methods to study the problem; collect, and analyse data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the research undertaken, both clearly and accurately in a written thesis. The student will also demonstrate both the ability to develop and/or apply models to study the problem and good data selection, collection and analysis skills. Students will normally be supervised by an academic member of the School of the Built Environment and by a joint supervisor external to the Department. The external supervisor will be an academic from another Department/School at Victoria University or from another institution or an industry practitioner.
Required Reading To be advised by lecturer.
Class Contact Six hours per week for two semesters.
Assessment Before commencing actual research, students must complete, to the satisfaction of the research supervisor, a paper critically reviewing the literature and providing a clear outline of the proposed research methodology to complete the thesis. The final thesis will be assessed by two examiners with expertise in the area of the research. These examiners may be internal or external to the School or the institution and will not include the supervisors. Students may be asked to present themselves for oral or written examination by these examiners, at the examiners’ discretion. Each examiner will independently recommend one of the following outcomes to the School’s Research and Graduate Studies Committee: (a) pass without further examinations; (b) pass, subject to corrections to the satisfaction of the School’s Research and Graduate Studies Committee; (c) candidate to pass a written or oral examination to pass thesis; (d) deferred for resubmission after major revision; (e) fail. In the event that there is disagreement between the examiners, a third examiner will be appointed.

VCC8012 RESEARCH THESIS (PART TIME)
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VCC8040 PROJECT WORK (FULL-TIME)
Campus Footscray Park
Prerequisite(s) Research Methodology or Concurrently with it.
Learning Outcomes Students will be able to define and solve problems and issues related to industry. Be capable of analysing and finding appropriate solutions to problems using analytical and statistical techniques.
Content The subject enables students to: identify a project problem and critically review relevant literature; determine appropriate methods to study the problem; collect, and analyse data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the project undertaken, both clearly and accurately in a written report. The report topic chosen will allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. The report will normally be from 8000 to 15,000 words. It will detail the problem, relevant literature, analysis conducted, conclusions and recommendations. Students will be supervised by an academic member of staff and where appropriate by a supervisor from another institution or from industry.
Required Reading To be advised by lecturer.
Class Contact Six hours per week for one semester.
Assessment Assessment will be by project work and report.

VCC8054 PROJECT WORK
Campus Footscray Park
Prerequisite(s) Research Methodology or Concurrently with it.
Learning Outcomes Students will be able to define and solve problems and issues related to industry. Be capable of analysing and finding appropriate solutions to problems using analytical and statistical techniques.
Content The subject enables students to: identify a project problem and critically review relevant literature; determine appropriate methods to study the problem; collect, and analyse data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the project undertaken, both clearly and accurately in a written report. The report topic chosen will allow the candidate to develop a methodology and to
apply it to an appropriate problem or situation. The report will normally be from 8000 to 15,000 words. It will detail the problem, relevant literature, analysis conducted, conclusions and recommendations.

Content

The subject examines the following topics.

Introduction to Project Management – the emerging profession. The subject examines the following topics. Introduction to Project Management: PM in building industry; definitions of the Management and Project Manager. Principles of economics in building industry; the building industry; building process in private sector. Structure of building industry – historically and the current trends; managerial perspective; trend towards construction/project management. Analytical model of building industry: operational model of building industry, urban geography and Australia – bird’s eye view. Building process in public sector; past history and current trends in management of public projects. Comparison of performance public/private sectors; overview of future developments. The interrelationship between owner, developer, financial sources, designers and contractors. Government body as owner/developer; invest financiers as owner/users. Government control and regulations applicable to buildings. (New BCA.) Role and task of functional activities of project managers: setting of project objectives; feasibility analysis; setting of budget; control of contract time and quality; risk apportionment between various parties. Design to user requirements: planning for life-cycle of the facility, management of small to medium size projects; role descriptions of project manager, architect, consultants and owners. Environmental and social constraints. Preparation EIS for building development project. Case studies illustrating the various aspects of project management.

Required Reading

To be advised by lecturer.

Recommended Reading


Assessment

Assignments, 20%; group project, 40%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

VCP5610 PROJECT MANAGEMENT PLANNING AND CONTROL

Campus Footscray Park

Prerequisite(s) VCP5600 Project Management Fundamentals (normally).

Content

The subject will review the development process of a project from its inception through to feasibility and go-ahead decision; detail design documentation, construction commissioning and life cycle planning; evaluate the role and function of Project Management in this process; explain the purpose and to detail the theoretical basis of various techniques used for planning and managing the building process. The subject content includes: Systems approach to project planning; basic principles and theory of systems analysis; current trends in community project planning. Overview of subject and introduction to project. Management of a ‘Public Interest Project’. Preparation of financial feasibility of a building project: factors involved, issues to be considered at concept stage; introduction of a case study. Capital decision making for project managers; cost concepts and cost factors. Project control and cost planning at feasibility and design stage. Cost versus quality assurance. Project control during construction phase: breakdown of the project for estimating, budgeting and financial control; project term planning; networks and other scheduling techniques; resource levelling; line of balance concepts. Project cost planning and control in public sector; pre-construction cost control, construction cost control; N.P.W.C. control method: data support system to cover – contingency, indexation and methods of monitoring and reporting. Project team planning; duties and responsibilities of the project manager. Planning techniques for high rise building construction, multi-activity chart; principles of production engineering applied to repetitive processes in building construction; special problems of high-rise design and construction. Principles of decision analysis; review of mathematical theory; application to decision process under uncertainty. Value engineering concepts and its application to building design and construction; application of value analysis in project management. Role and responsibilities of client’s member on P.M. team; risk sharing at various stages of project between the parties involved in the process; role of P.M. in client awareness of risks and rewards.

Required Reading

To be advised by lecturer.

Recommended Reading


Class Contact

Three hours per week for one semester.

Assessment

Assignments, 20%; group project, 40%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

VCP5620 PROJECT MANAGEMENT AND CONTRACTS

Campus Footscray Park

Prerequisite(s) VCP5600 Project Management Fundamentals (normally).

Content

The subject will develop an understanding and appreciation of management environment in Australia; evaluate current state of standard forms of contracts and its relevance to procurement of buildings by project management techniques. The subject examines formal organisational structures; role of project manager. Evaluation of managerial thought; management process – human and organisational aspect; human behaviour in organisations; current trends in organisational structure; comparison of U.S. and Australian management scene; overview of Australian management trends in construction industry. Examination of the Australian legal system. The role of Parliaments and the process of passing and the effect of legislation. The authority and the hierarchy of the Courts.

**Required Reading**

To be advised by lecturer.

**Recommended Reading**


**Class Contact**

Three hours per week for one semester.

**Assessment**

By assignments and projects and class participation. Assignment 1, 30%; exercises and assignments, 60%; class participation, 10%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

---

**VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content**

This subject will develop students’ skills in the use of a number of software packages in the areas of General Project Management Information Systems and Specialised Project Management Information Systems. Students will gain appreciation of where computer packages can aid the project management process for feasibility and sensitivity analysis, planning and monitoring and information processing and decision support functions. The subject content includes the decision to computerise, hardware and software procurement considerations, current computer usage in this industry; overview of computer hardware and software, current computer trends; overview of Project Management Information Systems (spreadsheet/financial modelling, planning and resource control, Data Base Management Systems (DBMS), and 4th Generation Languages (4GLs)); detailed investigation of at least two software packages from item above; managing change and introduction of computers, the machine/human interface, training and installation problems and opportunities simulation modelling as an alternative to traditional, activity based management systems, trends in CAD and its impact on Project Management; quality control and Project Management Information Systems.

**Required Reading**

To be advised by lecturer.

**Recommended Reading**


---

**VCP5716 PROJECT DEVELOPMENT**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content**

This subject will develop skills and techniques to assess and manage building property and to appreciate the role and objectives of developers and property managers. Subject content examines Management of property in the economy: An overview; typology of property relationships between project management and Property Management. Feasibility and economic issues in development of property: Elements of a property development feasibility study. Parameters of property investment. Decisions including market analysis and financial evaluation techniques. Property investment criteria and considerations. Management of the development process (a client perspective); client briefing; formation of project team; design management, construction and financial management, project marketing. Financial feasibility – Case study and methods of evaluation. Law and property management – Strata titles; standard mortgage clauses; standard lease agreements. Land valuation and techniques for valuing property. Market survey and predictions – impact of macro-economic conditions on development and marketing of space. Sources of finance, taxation, cash flow and forms of ownership. Management of leasehold, rental and home unit properties. Shopping centre development and management. Computer applications on financial feasibility analysis. Insurance, obsolescence, maintenance and replacement considerations.

**Required Reading**

To be advised by lecturer.

**Recommended Reading**


**Class Contact**

Three hours per week for one semester.

**Assessment**

Assignments, 15%; group project, 45%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

---

**VCP5726 PROJECT PROCUREMENT MANAGEMENT**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content**

This subject will develop an understanding of procurement systems and modern building technology with respect to procurement options available to project sponsors including build-ability and use-ability issues: The subject content provides an overview of procurement systems and modern technology and the problems that have arisen from it, the lessons to be learned from them and how to try and avoid similar pitfalls in the future. Forms of traditional and non-traditional procurement options such as D&B, GMP, BOO/BOT. Modern building materials and the problems that are being encountered in their use, including concrete, cement sheet, brickwork, etc. Building materials and their modern usage, including aluminium, steel and plastics; looking at usage and cost considerations. Modern formwork systems. Fire protection approach to building. On-site considerations. Materials handling – cranes, hoists, concrete control, concrete pumping and mix design criteria, safety factors and cost implications. Modern construction techniques.

**Required Reading**

To be advised by lecturer.

**Recommended Reading**


**Class Contact**

Three hours per week for one semester.

**Assessment**

Individual assignment, 10%; group assignment, 5%; presentation, 5%; report, 40%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.
VCP5736 FACILITY LIFE CYCLE COSTING
Campus Footscray Park
Prerequisite(s) Nil

Content A discussion of and the need for consideration of lifecycle costing; maintainability and efficiency. Terotechnology: why we need to use terotechnology in building industry; economic and technical factors – measures of performance; present state of knowledge. An integrated treatment of design, specification, construction use, maintenance and re-use phases of the project and the effect of each phase on the life cycle costs of the building. Discounting theory. Time value of money; discounting formulae; inflation; depreciation, taxation; before and after-tax project return; evaluation methods for economy studies. Theory of life-cycle cost optimisation. Basis of theoretical analysis of costs; total life-cost concepts; maintenance costs and capital costs; energy costs and capital costs; taxation and other factors; constraints; technical and others. Practice of life-cycle cost optimisation. Case study; practical issues; introduction; outline of factors to be considered in building obsolescence and refurbishment; market aspects; physical aspects and limitations; authorities and regulatory constraints; economic constraints. Measurement and the assessment of utilisation of resources during each phase of the building process. Design phase (including brief documentation); construction phase; functional (occupational) life; re-evaluation as to refurbish or demolish phase. Asset management using an integrated planning and budgeting approach. Need for an integrated system; provision of funds at regular intervals and/or in emergency situations; fabric of building and other services; total assets management; case-studies – Latrobe system, others. Operational control. Control systems; identification of effective, preventive and remedial measures. Establishment of a maintenance policy. Preventive maintenance; corrective maintenance; records and register for maintenance as a control tool; accounting and costs records and audits. Degradation of buildings. Identification of maintenance approaches for building structure, fabric, equipment and plant; nature and causes of degradation. Information and management systems. Building servicer supervisory system; description Local Monitoring and Control Systems (LMCS); Central Supervisory Systems (CSS). Building engineering services information and management systems; functions; commercially available packages; selection, evaluation of benefits. Case study presentation and review.

Required Reading To be advised by lecturer.


Class Contact Three hours per week for one semester.

Assessment Assignment, 20%; group project, 40%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

VCP5745 BUILDING REGULATORY MANAGEMENT
Campus Footscray Park
Prerequisite(s) Nil

Content The subject will develop a suitable background and understanding of by-laws and regulations that apply to building activities in Victoria. Subject content includes authorities controlling building activities; role and function of the building surveyors; contents and interpretation of various by-laws and regulations governing building activities such as: Local Government Acts, Building Code of Australia, Water and Sewerage Acts, Health Act, Labour and Industry Act, Lifts and Crane Act, Scaffolding Act, Environmental Protection Act, by-laws governing fire protection, Strata and Cluster Titles Act, Housebuilding’s liability, Land use and development strategy, Guide to administrative procedures, Planning guidelines, Townscape and heritage considerations, Checklist of requirements in a major development. The role of various professional disciplines. General introduction to BC Act.


Required Reading To be advised by lecturer.


Class Contact Three hours per week for one semester.

Assessment Assignments, 20%; examination, 70%; class participation, 10%. Students must attain a mark of 50% in each assessable component to pass this subject. Supplementary assessment will not be available.

VCP5800 TELECOMMUNICATIONS PROJECT MANAGEMENT
Campus Footscray Park
Prerequisite(s) VCP5800 Project Management Fundamentals (normally).


Required Reading To be advised by lecturer.


Class Contact Three hours per week for one semester.

Assessment Assignments, 20%; group project, 40%; examination, 40%. Students must attain a mark of at least 50% in each assessable component to pass this subject.

VMC5672 NUMERICAL TECHNIQUES AND PROGRAMMING
Campus Footscray Park
Prerequisite(s) Nil


Class Contact Three hours weekly (one lecture, two tutorials/computer based laboratory) for 12 weeks.

Assessment Final assessment, 50% (Five assignments on computer implementation of numerical algorithms, each of 2500-5000 words 10% each). Final Examination, three hours, (50% of final assessment). Students must attain a mark of at least 50% in each component to pass this subject.
VMC5771 COMPUTER AIDED ENGINEERING
Campus Footscray Park
Prerequisite(s) N/A
Class Contact Three hours weekly for 12 weeks, comprising of one lecture and two tutorials.
Assessment Three assignments, 60% (each of 20% based on analytical and computational works and report of 5000-7500 words); three-hour final examination, 40% (open book). Students must attain a mark of at least 50% in each component to pass this subject.

VME5782 SPECIALIST ELECTIVE
Campus Footscray Park
Prerequisite(s) VMM5771 Research Techniques.
Content One of the following topics, subject to staff availability: VMM5782 Composite materials design. VMS5782 Flow measurement techniques, VMS5772 Optimization, VMV5772 Transportation and packaging dynamics.
Required Reading As recommended by the lecturers.
Recommended Reading As recommended by the lecturers.
Class Contact Three hours weekly comprising of lectures, tutorials and laboratory for 12 weeks
Assessment As specified by the Lecturer of the Specialist Elective chosen.

VMF5881 ADVANCED FLUID-THERMO DYNAMICS
Campus Footscray Park
Prerequisite(s) Nil
Learning Outcomes 1. Understand and be able to apply the various turbulence models to solve practical fluid related engineering problems.
2. Understand and be able to calculate the heat transfers from conduction, convection and radiation. 3. Understand the combustion phenomena in internal combustion engines and in fire spread in buildings.
Class Contact Three hours weekly of lectures, tutorials, and laboratory for 12 weeks
Assessment Two assignments (20%)(each of 10%, 2500-5000 words), one hour test (10%), laboratory (20%), and Final three hour examination (50%)

VMP5872 RESEARCH PROJECT
Campus Footscray Park
Prerequisite(s) VMM5771 Research Techniques
Content Methods of formulating research problem, literature survey. Techniques of poster presentation, final report, research seminar. Carrying out a research project of interest: acquiring data, processing data. Presenting findings in seminar, by poster presentation and writing research report.
Required Reading Evans, 1995, How to write a better thesis or report, Melbourne University Press.
Class Contact Lectures, tutorials and project presentation in the form of poster and seminar, three hours per week for 12 weeks.
Assessment Project presentation, 40% (Project proposal 10%, poster presentation 10%, seminar presentation 20%); Final Report, 60%. Students must attain a mark of at least 50% in each component to pass this subject.

VMR8001 RESEARCH THESIS 1 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

VMR8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

VMR8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

VMR8012 RESEARCH THESIS 2 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

VMT5882 COMPUTATIONAL FLUID DYNAMICS
Campus Footscray Park
Prerequisite(s) Nil
Content The numerical schemes used for CFD, their accuracy and stability limit. Turbulence models: eddy viscosity concept, k-? model, RNG models; turbulence models near the wall. Boundary and initial conditions specification, wall boundary, open boundary, inlet and exit. How to divide the computation domain into small regions; Grid generation and near wall requirement; CFD simulations for smoke spread during a fire in building, air-conditioning system, air flow inside an engine manifold and exhaust system. Basic concept of LES and DNS; their applications and limitations.

**Recommended Reading** Anderson, 1995, Computational Fluid Dynamics, McGraw-Hill.

**Class Contact** Three hours of lectures, tutorials, and computer-based laboratory per week for 12 weeks.

**Assessment** Two assignments, 20% (each of 10%, 2500-5000 words); one one-hour test, 10%; laboratory, 20%; final three-hour examination, 50%. Students must attain a mark of at least 50% in each component to pass this subject.

---

**VMW5781 ADVANCED DYNAMICS AND VIBRATIONS**

**Campus** Footscray Park

**Prerequisite(s)** Nil.


**Class Contact** Three hours weekly of lectures and tutorials, laboratory for 12 weeks.

**Assessment** Three assignments, 30% (each of 10% based on analytical and numerical analysis and a report of 2000-3000 words); laboratory, 20%; one three-hour open book examination, 50%. Students must attain a mark of at least 50% in each component to pass this subject.

---

**VMW5782 COMPUTATIONAL DYNAMICS**

**Campus** Footscray Park

**Prerequisite(s)** VMW5781 Advanced Dynamics and Vibration.


**Class Contact** Three hours per week for 12 weeks, comprising of lectures, tutorials, experimental laboratory and computer-based laboratory.

**Assessment** Three assignment, 20% (each of 10% and 2500-5000 words); laboratory, 20%; one three-hour final examination, 50%. Students must attain a mark of at least 50% in each component to pass this subject.

---

**VMW5682 MANUFACTURING MATERIALS**

**Campus** Footscray Park

**Prerequisite(s)** Nil.

**Content** Advanced topics in the following areas: Fabrication processes in casting, cutting and solid shaping and their relationship to polymeric, ceramic and metallic materials. Selection of materials for clean manufacturing.


**Class Contact** Lectures, tutorials and seminars, three hours/week for 12 weeks.

**Assessment** Three assignments, 60% each of 4000-5000 words; two two-hour tests, 40%.

---

**VMW5771 RESEARCH TECHNIQUES**

**Campus** Footscray Park

**Prerequisite(s)** Nil.

**Content** An overview of the history of engineering and scientific research. An introduction to the philosophy of science and the ideas of Popper, Kuhn, Feyerabend and others. Design and Analysis of Experiment. Error and uncertainty. Statistical Data Analysis. Taguchi method for design and experiments.


**Class Contact** Three hours per week of lectures, tutorials and laboratory-based assignments for twelve weeks.

**Assessment** Four assignments, 40% (each of 10%, of 2500-5000 words); final three hour examination, 60%. Students must attain a mark of at least 50% in each component to pass this subject.

---

**VPP5600 PRINCIPLES OF PROJECT MANAGEMENT**

**Campus** Footscray Park

**Prerequisite(s)** Nil.

**Content** Engineering measurement theory and fundamentals; Instrumentation for mechanical processes; Signal conditioning and dynamic response of measurement systems; Data acquisition systems; Frequency filters. Interfacing with computers. Signal theory; Time domain analysis; Synchronous averaging, probability distribution estimates and statistical parameters; Frequency domain analysis; Fast Fourier Transform (FFT); Shock Response Spectrum; Frequency response functions, coherence, signal-to-noise ratio; Non-stationary signals; Non-Gaussian signals.


**Class Contact** Two-hour lecture weekly. One-hour laboratory session/tutorial fortnightly.

**Assessment** Five assignments (50%) based on laboratory exercises. Final three-hour examination (50%). Students must attain a mark of at least 50% in each component to pass this subject.

---

**Learning Outcomes** It will equip professionals already in industry with advanced principles and techniques of project management to enable them to assume the role of project manager and/or become effective members of project management teams.

**Content** The unit of study (UoS) will introduce and define project management as applicable to the concept, development design and documentation, procurement and maintenance, of any facilities including buildings and infrastructure. To introduce participants to Project Management Principles and learn about working in a project team environment. The UoS examines the following topics. Introduction to Project Management: PM’s role in achieving a successful project in industry and environment; definitions of the Management and Project Management. Trends in project management – historically and the current environment; managerial perspective; trend towards various modes of project delivery. Comparison of performance in public/private sectors; overview of future developments. The interrelationship between owner, developer, financial sources, designers and contractors. Role and task of functional activities of project managers: setting of project objectives; feasibility analysis; setting of budget;
control of contract time and quality; risk apportionment between various parties. Design to user requirements: planning for life-cycle of the facility; management of small to medium size projects; role descriptions of project manager, architect, consultants and owners. Environmental and social constraints. Preparation EIS for building development project. Case studies illustrating the various aspects of project management.

**Required Reading**

Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.

**Recommended Reading**


**Class Contact**

Three hours per week for one semester.

**Assessment**

Assignments, 20%; group project, 40%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this UoS.

**VPP5610 PROJECT PLANNING AND CONTROL**

*Campus* Footscray Park

*Prerequisite(s)* Nil.

*Co-requisites* Nil.

**Learning Outcomes**

It will equip professionals already in industry with advanced principles and techniques of project management to enable them to assume the role of project manager and/or become effective members of project management teams.

**Content**

The unit of study (UoS) will review the development process of a project from its inception through to feasibility and go-ahead decision; detail design documentation, construction commissioning and life cycle planning; evaluate the role and function of Project Management in this process; explain the purpose and to detail the theoretical basis of various techniques used for planning and managing the process. The UoS content includes: Systems approach to project planning; basic principles and theory of systems analysis; current trends in community project planning. Overview of UoS and introduction to project. Management of a Public Interest Project. Preparation of financial feasibility of a development project: factors involved, issues to be considered at concept stage; introduction of a case study; role of manager in decision making for project management; cost concepts and cost factors. Project control and cost planning at feasibility and design stage. Cost versus quality assurance. Project control during development phase; breakdown of the project for estimating, budgeting and financial control; project time planning; networks and other scheduling techniques; resource levelling; line of balance concepts. Project cost planning and control in public sector; pre-development cost control, development cost control; cost control method: data support system to cover contingency, indexation and methods of monitoring and reporting. Project team planning: duties and responsibilities of the project manager. Planning techniques for repetitive construction, multi-activity chart; principles of production engineering applied to repetitive processes in projects; special problems of repetitive projects. Principles of decision analysis; review of mathematical theory; application to decision process under uncertainty. Value engineering concepts and its application to design and development; application of value analysis in project management. Role and responsibilities of client’s member on P.M. team; risk sharing at various stages of project between the parties involved in the process; role of P.M. in client awareness of risks and rewards.

**Required Reading**

Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.

**Recommended Reading**


**Class Contact**

Three hours per week for one semester.

**VPP5620 PROJECT STAKEHOLDERS MANAGEMENT**

*Campus* Footscray Park

*Prerequisite(s)* Nil.

*Co-requisites* VPP5600 Principles of Project Management.

**Learning Outcomes**

It will equip professionals already in industry with processes and knowledge to deal with project scenarios. It will enable them to assume the role of and participating in the various functions involved in the project. The UoS will make the various stakeholders aware of their responsibilities as well as their liabilities.

**Content**

The unit of study (UoS) will develop an understanding and appreciation of management environment in Australia; evaluate current state of standard forms of contracts and its relevance to procurement of buildings by project management techniques. The UoS examines formal organisational structures; role of project manager. Evaluation of managerial thought; management process – human and organisational aspect; human behaviour in organisations; current trends in organisational structure; comparison of U.S. and Australian management scene; overview of Australian management trends in construction industry. An introductory examination of the Australian legal system. The role of Parliaments and the process of passing and the effect of legislation and the role of the Courts. General principles of contract law. An examination of the new draft form of AS4000 form of contract. A comparison of standard forms of contracts. An outline of the law relating to the principles concerning project management. Examination of the different types of project management. Formation of a contract. Terms of a contract. Avoidance. Discharge of a contract. Remedies. Quantum merit. Contractual and working relationship between various stakeholders in the project. Roles and Responsibilities of each stakeholder; risk apportionment between various stakeholders as well as determination of risks to be covered by insurances, bonds or other instruments.

**Required Reading**

Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.

**Recommended Reading**


**Learning Outcomes**

Upon completion of the UoS, the students should be able to understand and risk profile in a typical project, conduct a simple risk assessment and develop a risk management plan.

**Content**

This unit of study (UoS) studies the fundamentals of risk management and risk management theories in relation to projects, definitions of risks and opportunities, risk management system, risk identification and classification, risk probability and impact, qualitative risk analysis techniques, quantitative risk analysis techniques, risk treatment methods, decision making, risk perception, risk communication, risk analysis software introduction, risk versus opportunity. Case studies are used to examine and develop understanding of risk management system and its implementation.

**Required Reading**

Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.

**Recommended Reading**

VPP5630 RESEARCH METHODS
Campus Footscray Pardk
Prerequisite(s) Nil
Co-requisites Nil
Learning Outcomes Upon the completion of this UoS, the students should be able to understand research skills, techniques and methodologies for the completion of a full research proposal.
Content This unit of study (UoS) aims at informing students of the range of research methods appropriate to the project management discipline and developing basic skills for carrying out research. It introduces nature of research, types of research, research problems and objectives, literature review, research design, research ethics, data collection, measurement and analysis methods, typical qualitative and quantitative methods, development of research proposal, advanced information retrieval skills, etc.
Required Reading Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.
Class Contact Three hours per week for one semester.
Assessment Assignment 1 (40%); Assignment 2 (O20% and Report 40%)

VPP5716 PROJECT DEVELOPMENT ANALYSIS AND REVIEW
Campus Footscray Pardk
Prerequisite(s) Nil
Learning Outcomes Upon the completion of this UoS, the students should be able to understand project development process, to assess and manage projects such as properties and to appreciate the role and objectives of developers and project managers.
Content The UoS will develop skills and techniques to assess and manage projects and to appreciate the role and objectives of project managers and developers. Unit content examines management of project in the economy: An overview: typology of relationship between property, project management and property management. Feasibility and economic issues in development of project: Elements of a project development feasibility study. Parameters of project investment. Decisions including market analysis and financial evaluation techniques. Project investment criteria and considerations. Management of the development process (a client perspective): client briefing; formation of project team; design management, construction and financial management, project marketing. Financial feasibility – Case study and methods of evaluation. Law and property management – Strata titles; standard mortgage clauses; standard lease agreements. Land valuation and techniques for valuing project and property. Market survey and predictions – impact of macro-economic conditions on decisions to develop; marketing of space.
Required Reading Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.
Class Contact Three hours per week for one semester.
Assessment Assignments, 15%; group project, 45%; examination, 40%. Students must attain a mark of 50% in each assessable component to pass this UoS.
communication skills in accepted standards of scholarship, style and presentation.

**Content** The student needs to choose a topic related to project or project management from the real world. Identify a research problem and critically review the relevant literature; determine appropriate methods to study the problem; collect, and analyze data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the research undertaken, both clearly and accurately in a written thesis. The research topic chosen will allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. The thesis will normally be from 30,000 to 50,000 words. It will report on independently conducted research which demonstrates the student's ability to clearly define a problem, to undertake a detailed literature search and review the literature on the topic area. The student shall also demonstrate both the ability to develop and/or apply models and critically review the relevant literature; determine appropriate methods to study the problem; collect, and analyze data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the research undertaken, both clearly and accurately in a written thesis.

**Required Reading** Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.


**Class Contact** A three-hour briefing is given to students at the start of the subject. Six hours per week for two semesters.

**Assessment** Before commencing actual research, students must complete, to the satisfaction of the research supervisor, a paper critically reviewing the literature and providing a clear outline of the proposed research methodology to complete the thesis. The final thesis will be assessed by two examiners with expertise in the area of the research. These examiners may be internal or external to the Department or the institution and will not include the supervisors. Students may be asked to present themselves for oral or written examination by these examiners, at the examiners' discretion. Each examiner will independently recommend one of the following outcomes to his/her assessment of the thesis: (a) pass without further examination; (b) pass, subject to corrections to the satisfaction of the Department's Research and Graduate Studies Committee; (c) candidate to pass a written or oral examination to pass thesis; (d) deferred for resubmission after major revision; (e) fail. In the event that there is disagreement between the examiners, a third examiner will be appointed.

**VPP8080 MINOR THESIS (FULL TIME – OVER 1 SEMESTER)**

- **Campus** Footscray Park
- **Prerequisite(s)** VPP5630 Research Methods
- **Co-requisites** VPP5630 Research Methods

**Learning Outcomes** Upon the completion of this subject, the students should have developed an in-depth knowledge of particular fields which they chose; be able to carry out independent research; have developed critical, creative and analytical thinking and effective problem-solving; have developed written and verbal communication skills in accepted standards of scholarship, style and presentation.

**Content** The student needs to choose a topic related to project or project management from the real world. Identify a research problem and critically review the relevant literature; determine appropriate methods to study the problem; collect, and analyze data, and generate results using suitable statistical and analytical techniques; draw conclusions, critically evaluate the process undertaken and make recommendations for future research and for practice; present the results of the research undertaken, both clearly and accurately in a written thesis. The research topic chosen will allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. The thesis will normally be from 30,000 to 50,000 words. It will report on independently conducted research which demonstrates the student's ability to clearly define a problem, to undertake a detailed literature search and review the literature on the topic area. The student shall also demonstrate both the ability to develop and/or apply models to study the problem and good data selection, collection and analysis skills. Students will normally be supervised by an academic member of the university and by a joint supervisor from the industry.

**Required Reading** Formal class notes will be provided to students for each UoS. These notes are reviewed and updated regularly.
SCHOOL OF BIOMEDICAL SCIENCES

Below are details of courses offered by the school of Biomedical Sciences in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to International students are marked with the (I) symbol.

BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCES (I)
Course Code: SBBS

Course Objectives
The Bachelor of Science in Biomedical Sciences is designed to provide professional training in the application of science to human biology in the market place. The course aims to produce highly flexible but well-trained graduates who will be adequately equipped to adapt to a changing environment. Four different streams are available for this degree in Biomedical Sciences including wellness management, science media and communications, marketing of biomedical products, and medical research/clinical sciences. Although, students are encouraged to follow one of these streams, they are able to choose from the entire range of subjects offered in the Biomedical Sciences degree. The overall objectives of the degree in Biomedical Sciences are to provide graduates with an excellent knowledge of human physiological functions together with skills in critical analysis and with highly developed communication skills. Complementary knowledge will be developed in a wide range of selected disciplines including psychology, human development, management, marketing, visual and audiovisual communications and a language.

The Wellness Management stream is designed to produce graduates with an understanding of human function. Graduates will be eligible for employment as Wellness consultants either in private practice or within government agencies, large companies or corporations. The Science, Media and Communications specialisation is more specifically designed to produce graduates who would be knowledgeable in human biology and biomedical sciences. Graduates would have a broad education, being highly literate and articulate in specialised areas such as an Asian Language, Professional Writing, and Communications. Graduates in the Management and Marketing of Biomedical Products stream will have an in-depth knowledge of basic human biological function combined with specialised skills in either human resource management or in marketing. This combination of skills appears to be unique in Australia as there seems to be no other course in Australia with this combination of subjects. The Medical Research/Clinical Sciences stream will provide students with a range of skills appropriate to leading edge medical research. This degree offers a range of subjects appropriate for further postgraduate study in medical and paramedical fields.

Duration of the course
The course will be equivalent to three years of full-time study for students entering the course at Year 1 or part-time equivalent.

Admission Requirements
You need to have an aptitude for science. VCE Units 3 and 4 English with a study score of at least 20 in English.

Middle Band Selection
Completing Biology and/or Chemistry can lead to an ENTER 3.5 points higher per study.

Course Structure
The course will comprise of two 12 week semesters or 24 weeks per year for three years. The course outline together with the contact hours per week is contained in the following pages. First year subjects listed are currently running at the St Albans Campus.

Electives may be taken from the wide range of science and general subjects listed below. Other suitable electives (not listed below) may also be chosen subject to the approval of the course co-ordinator. If general electives are selected, students are encouraged to take a four-six semester sequence in one of the following areas including Human Resource Management, Marketing, Communications, Psychology, Professional Writing or a language other than English. Electives will be offered subject to adequate demand.

Students enrolled in the Biomedical Science course Degree must take a minimum of 60 per cent of their total credit points from subjects offered by the School of Biomedical Sciences. In addition, no more than 40 credit points from general elective subjects shall be at first year level, and at least one elective shall be commensurate with the year of the student’s course.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1100 FUNCTIONAL ANATOMY OF THE TRUNK</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM1501 FOUNDATIONS IN BIOMEDICAL SCIENCE A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM1518 HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>APP1012 PSYCHOLOGY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>OR</td>
<td>Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>Semester 2</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
<td>Full Fee (AU$)</td>
</tr>
<tr>
<td>RBM1502 FOUNDATIONS IN BIOMEDICAL SCIENCE B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM1200 FUNCTIONAL ANATOMY OF THE LIMBS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM1528 HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td>APP1013 PSYCHOLOGY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>OR</td>
<td>Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester 1</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
<td>Full Fee (AU$)</td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM2530 PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>Two of the Following OR other Science, Psychology, Communications, Management and Marketing electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM2100 REHABILITATION ANATOMY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM2365 MEDICAL MICROBIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
<td></td>
</tr>
<tr>
<td>RBM2560 MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBM2610 BIOMEDICAL SCIENCES AND SOCIETY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM2540 PATHOPHYSIOLOGY 2</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM2800 CARDIORESPIRATORY AND RENAL PHYSIOLOGY</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>Two of the following OR other Science, Psychology, Communications, Management and Marketing electives:</td>
<td></td>
</tr>
<tr>
<td>RBM2200 FUNCTIONAL ANATOMY OF THE HEAD AND BACK</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3610 BIOMEDICAL SCIENCE, ETHICS AND VALUES</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBF2330 CELL BIOLOGY</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Semester 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose at least three of following core Units of Study below per semester.</td>
<td></td>
</tr>
<tr>
<td>RBM3264 ADVANCED NERVE AND MUSCLE PHYSIOLOGY</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3550 GROWTH AND EARLY DEVELOPMENT</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3590 ADVANCED EXPERIMENTAL TECHNIQUES</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3720 IMMUNOLOGY</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3810 WELLNESS 1</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM3640 ADVANCED NEUROSCIENCES</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3560 GROWTH, DEVELOPMENT AND AGING</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3660 HUMAN DEVELOPMENTAL AND CLINICAL GENETICS</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3800 PHARMACOLOGY</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3820 WELLNESS 2</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3910 PROJECT</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBM3960 NUTRITIONAL FRONTIERS</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM2201 CONSERVATION GENETICS</td>
</tr>
<tr>
<td>RBM3101 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR CONSERVATION &amp; HEALTH</td>
</tr>
<tr>
<td>RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT</td>
</tr>
<tr>
<td>RBM3960 NUTRITIONAL FRONTIERS</td>
</tr>
<tr>
<td>Other electives from semesters 1 or 2 with 12 credit points</td>
</tr>
</tbody>
</table>

**BACHELOR OF SCIENCE IN ECOLOGY AND SUSTAINABILITY**

**Course Code:** SBES

**Course Objectives**
This course provides the flexible combinations of professional education and technical training that are required to develop the practical solutions necessary to achieve sustainable management of the Australian environment. There is a strong emphasis on hands-on skills, including building links across scientific, social and business sectors environmental analysis, effective communication and project management.

The course structure is based on a limited number of core subjects which provide a solid foundation to understanding of the biology, ecology and sustainable management of the Australian landscape, supplemented by a wide range of electives drawn from the environmental engineering, business, tourism, community development and human bioscience disciplines.

Students can choose from electives according to the four major streams in the course: a) ecology and natural resource management (with specialisations in aquatic engineering and environmental engineering); b) ecology and community development; c) ecology and tourism/business; d) ecology and human bioscience/wellness. These are suggested streams only and students may select electives according to their desired academic and career pathway, subject to approval from the Head of Group.

The course teaches students the necessary skills to perform a wide range of activities in ecology and environmental science in addition to environmental issues and community studies, and the skills for communicating their ecological knowledge to science professionals and non-professionals. The course structure is practically based and flexible, allowing a mix of in-depth studies and specializations with novel combinations of subjects and skills across diverse disciplines not usually covered in science courses.

**Admission Requirements**
The minimum entry requirement for persons under 21 years of age on 1 January 2005 is the satisfactory completion of a Year 12 course of study approved by the Victorian Curriculum and Assessment Board (VCAB) or an equivalent program approved by Victoria University for entry. The minimum ENTER score for 2005 is 70. Prerequisites are Units 3 and 4 – a study score of at least 20 in English (any).

There is also provision for mature age entry and entry as a disadvantaged person. Mature age provisions apply to those persons aged 21 years and over as at 1 January 2006.

**Course Duration**
The Bachelor of Science in Ecology and Sustainability program requires the equivalent of three years full-time study. A fourth year may be taken in the Honours program.

**Course Structure**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE1911 COMMUNICATIONS FOR THE PROF SCIENTIST 1</td>
<td>12 0.1250 1 $510 $637 $1,430</td>
</tr>
<tr>
<td>RBF1310 BIOLOGY 1</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>RBF1150 GLOBAL ENVIRONMENTAL ISSUES</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>OR RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>OR RMA1110MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12 0.1250 2 $726 $908 $1,584</td>
</tr>
<tr>
<td>OR Elective</td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td>Credit Point</td>
</tr>
<tr>
<td>------------</td>
<td>--------------</td>
</tr>
<tr>
<td>ACE1912 COMMUNICATIONS FOR THE PROF SCIENTIST 2</td>
<td>12</td>
</tr>
<tr>
<td>RBF1320 BIOLOGY 2</td>
<td>12</td>
</tr>
<tr>
<td>RBF1160 AUSTRALIAN LANDSCAPES AND BIOTA</td>
<td>12</td>
</tr>
<tr>
<td>AND/OR RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
</tr>
<tr>
<td>AND/OR RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
</tr>
<tr>
<td>AND/OR Elective</td>
<td></td>
</tr>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF2610 FUNDAMENTALS OF ECOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF2640 AUSTRALIAN ANIMALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF2630 COMMUNITY AND ENVIRONMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF2620 AUSTRALIAN PLANTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND/OR Elective</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Year 3

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF3600 AQUATIC ECOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF3610 BIOSTATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF3620 CONSERVATION AND SUSTAINABILITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMB3101 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR CONSERVATION &amp; HEALTH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF3630 ENVIRONMENTAL IMPACTS AND MONITORING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF3640 TERRESTRIAL ENVIRONMENTS AND REHABILITATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF3650 POLLUTION BIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF3660 INDIGENOUS SOCIETY AND ENVIRONMENTAL MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCS3411 ENVIRONMENTAL LEGISLATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Electives 3

1. Students taking the Ecology and Human Bioscience/Wellness stream can take RBF1310 Biology 1 or RBF1510 Human Bioscience 1A.
2. Students enrolled in the Natural Resource Management stream would be advised to take RCS1110 Chemistry for Biological Sciences A and RCS1120 Chemistry for Biological Sciences B, as these subjects are prerequisites for some 2/3 level core subjects in that stream. Students in other streams would not be so advised.

Students taking either of the Engineering specialisations within the Natural Resource Management stream should take RCS1110 Chemistry for Biological Sciences A and RCS1120 Chemistry for Biological Sciences B in their second year of study. All others within the stream should take these subjects in their first year.

Students enrolled in the Natural Resource Management stream would be required to take RMA1110 Mathematics for the Biological & Chemical Sciences 1 and RMA1120 Mathematics for the Biological & Chemical Sciences 2 if they lack VCE Mathematics, but could take an elective if they have VCE Mathematics. This is at the discretion of the course co-ordinator.

Students taking either of the Engineering specialisations within the Natural Resource Management stream should take RMA1110 Mathematics for the Biological & Chemical Sciences 1 and RMA1120 Mathematics for the Biological & Chemical Sciences 2 in the first year of study. All others within the stream should take these subjects in their second year.

3. Prescribed and free electives are those listed below.

Electives

At least 6 electives are required to be taken over the course of the degree. Electives other than those listed below may be taken at the discretion of the Head of School. The total subject hours must be within the prescribed range and due consideration must be given for prerequisites.

Science electives may be chosen from any of the degree subjects offered by the Faculty of Health, Engineering and Science. Subjects from programs offered by other Faculties may also be selected as elective subjects, subject to the approval of the appropriate Faculty. Students should refer to the subject outlines listed within other Schools and Faculties for further information.

Students are advised to seek the assistance of academic staff when making their elective choice, as the judicious selection of electives can provide an opportunity to undertake a second major study alongside the primary degree specialization.
<table>
<thead>
<tr>
<th>Prescribed Electives</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology and Natural Resource Management Stream</td>
<td>RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

These Units of Study are recommended.

Aquatic Engineering and Environmental Engineering Specializations
It is possible to undertake a number of units in Aquatic Engineering and Environmental Engineering Specializations. Please discuss with the Course Coordinator prior to selection.

Ecology and Community Development Stream
ASA1021
ASA1022

Students taking this stream should choose two electives from the following:
ASA2021
ASA2022

ASC3095 CONFLICT RESOLUTION IN GROUPS AND COMMUNITIES | 12 | 0.1250 | 1 | $510 | $637 | $1,430 |

Ecology and Tourism/Business Stream
BHO1190 INTRODUCTION TO TOURISM | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO2286 NATURE BASED TOURISM | 12 | 0.1250 | 1 | $510 | $637 | $1,430 |

Students taking this stream should choose two electives from the following:
BHO2255 TOURISM ENTERPRISE MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO1192
BHO3437
BHO3500 HOSPITALITY AND TOURISM INDUSTRY PROJECT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO1171 INTRODUCTION TO MARKETING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BAO1101 ACCOUNTING FOR DECISION MAKING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Ecology and Human Bioscience/Wellness Stream
RBM2530 PATHOPHYSIOLOGY 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2540 PATHOPHYSIOLOGY 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM3810 WELLNESS 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM3820 WELLNESS 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Students taking this stream could include electives from the following:
RBM2260 DIET AND NUTRITION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2560 MEDICAL BIOCHEMISTRY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2610 BIOMEDICAL SCIENCES AND SOCIETY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM1514 FUNCTIONAL ANATOMY 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM1524 FUNCTIONAL ANATOMY 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2361 SAFETY PRACTICE | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Suitable Free Electives
Some electives may be prescribed for certain streams.
RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
ASA1021
ASA1022
ASA2021
ASA2022

ASC3095 CONFLICT RESOLUTION IN GROUPS AND COMMUNITIES | 12 | 0.1250 | 1 | $510 | $637 | $1,430 |
BAO1101 ACCOUNTING FOR DECISION MAKING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO1190 INTRODUCTION TO TOURISM | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO1192
BHO2255 TOURISM ENTERPRISE MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
BHO2286 NATURE BASED TOURISM | 12 | 0.1250 | 1 | $510 | $637 | $1,430 |

RBM1514 FUNCTIONAL ANATOMY 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM1524 FUNCTIONAL ANATOMY 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2201 CONSERVATION GENETICS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2260 DIET AND NUTRITION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2560 MEDICAL BIOCHEMISTRY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM2610 BIOMEDICAL SCIENCES AND SOCIETY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM3101 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR CONSERVATION & HEALTH | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM3530 ENVIRONMENTAL PHILOSOPHY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RBM3540 LEADERSHIP AND THE ENVIRONMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

54
Other Course Specific Notes
Students are advised to seek assistance and advice of academic staff when making their elective selection. Engineering and Tourism/Business subjects are offered only on the Footscray Park Campus in the first instance. Timetable constraints make combinations of subjects offered on more than one Campus difficult and so must be selected with care.

Field trips
Students will be required to participate in field trips throughout the course. These will vary from one-day excursions to three-day field camps. Some field trips may be held over weekends. Participation in these activities forms part of the assessment of the subjects, and provides essential experience in field techniques. Exemption from these activities is available only by prior application where circumstances preclude participation.

Professional Recognition
Graduates of the course are eligible to join professional and learned societies such as the Ecological Society of Australia and the Australian Institute of Biologists.

BACHELOR OF SCIENCE IN NUTRITIONAL THERAPY
Course Code: SBNT

Nutritional Therapy is founded in medical science and on peer-reviewed evidence-based research. Nutritional Therapists use manipulation of food and diet for therapeutic purposes. Often a patient's condition can be improved by suitably matching food intake to their condition, together with nutriceutical prescription and appropriate lifestyle advice. The graduates from this course will not be Dieticians, but will be able to treat chronic non-life threatening conditions.

This course is modelled on the highly successful BSc Nutritional Therapy courses offered in Europe. At present this is the only similar course in Nutritional Therapy in Australia.

Course Objectives
The Bachelor of Science in Nutritional Therapy will provide an alternative education and training program for those wishing to apply their knowledge of Nutrition to the treatment of a range of clients by high-quality nutrition care and therapy. The objectives of the course are to produce Graduates able to function independently as Nutritional Therapists. At the end of the course, Graduates will be able to: evaluate and process requests for nutritional therapy; assess the client and formulate an appropriate course of nutritional therapy; educate the client in self-care therapy, and evaluate the client's response to the course of treatment.

The Graduates of this course will be able to make a valuable contribution to society as Nutritional Therapists in private practice, as Nutrition Consultants to the healthcare and fitness industries, and as practitioners in integrated health centres.

Admission Requirements Completion of Year 12 VCE, Units 3 and 4 of Chemistry, Biology and English with a study score above 25. You may be required to attend a selection and/or interview session.

Course Duration
Three years fulltime or part-time equivalent.

Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF2410 FOOD COMPONENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1100 FUNCTIONAL ANATOMY OF THE TRUNK</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1518 HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1528 HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1810 NUTRITIONAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1820 NUTRITION, SOCIETY, AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1830 DIET THERAPY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2570 PHYTOPHARMACEUTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHN0021 COUNSELLING SKILLS FOR NATURAL MEDICINE PRACTITIONERS</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM2141 PHARMACOLOGY AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2530 PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2540 PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2221 NUTRITIONAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2850 NUTRITIONAL THERAPEUTICS A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2855 NUTRITIONAL THERAPEUTICS B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM3810 WELLNESS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3820 WELLNESS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3850 NUTRITIONAL THERAPEUTICS C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3855 NUTRITIONAL THERAPEUTICS D</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3950 NUTRITIONAL THERAPY IN PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3955 NUTRITIONAL THERAPY IN PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3980 NUTRITIONAL FRONTIERS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3970 OPERATING A CLINICAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Professional Recognition
Graduates will be eligible for full membership of the following professional bodies upon completion of the course
- Australian Nutrition Society;
- British Association of Nutritional Therapy; (awaiting formal notification)

BACHELOR OF SCIENCE IN OCCUPATIONAL HEALTH AND SAFETY
Course Code: SBOPH

Course Objectives
The aim of the course is to produce graduates with a combination of knowledge and skills of science and disciplines related to occupational health and safety while having a focus on the management of occupational health and safety.

At the end of the course graduates should be able to:
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- utilise methods of scientific investigation in solving, occupational health and safety problems;
- thoroughly understand the scientific and technological bases of occupational health and safety;
- engender the professional confidence and respect of others;
- identify health hazards and safety problems and be able to make appropriate recommendations to management;
- understand and be able to effectively participate in decision-making processes in organisations in order to manage the promotion and implementation of occupational health and safety matters;
- act as an agent of change to improve OH&S at a workplace.

Admission Requirements

VCE entry: Units 3 and 4 – a study score of at least 20 in English (any) and in one of biology or chemistry. Middle band: Re-ranking is based on prerequisite studies and science (any).

TAFE entry: Normal entry requirements for articulation to the Bachelor of Science is the successful completion of an Advanced Diploma in Occupational Health and Safety. A significant number of such applicants are expected to be Occupational Health and Safety professionals seeking to upgrade their Advanced Diploma qualification to a degree in Occupational Health and Safety. Admission requirements may be determined by the Head of School for applicants who possess other appropriate TAFE or university qualifications related to occupational health and safety.

The course aims at maximising student access by providing flexibility and modulation in the delivery of units. Students in level 3 of the course can complete all units by distance education mode.

Course Structure

VCE entry: The course will comprise two 12 week semesters or 24 weeks per year for three years. Faculty of Health, Engineering and Science based units and some Faculty of Business and Law units will be delivered at the St Albans Campus. Other Faculty of Business and Law units will be delivered at the Footscray Park campus.

TAFE entry: Completion of appropriate TAFE courses such as the Advanced Diploma in OHS will enable students to enter the course with advanced standing. For details of credit arrangements go to: www.vu.edu.au/pathways.

Course Objectives

- act as an agent of change to improve OH&S at a workplace.

BACHELOR OF SCIENCE (HONOURS) APPLIED BIOLOGY (I)

Course Code: SHAB

Course Objectives

An Honours program is available in each of the degree specialisations. The aim of the honours program is to provide a course of advanced study at a fourth year level that builds on the knowledge and skills developed at degree level, and to prepare students for postgraduate research by developing skills in working independently, critical analysis of information, problem-solving, devising, designing and conducting experimental work and written and oral communication.

Admission Requirements

To qualify for entry to the honours program, applicants must hold a degree or equivalent with major studies in a relevant discipline and should normally have obtained a 'credit' average, or equivalent, in the final year of the degree.

Course Duration

The courses are offered on a full-time basis over one year or equivalent if on a part-time basis. Entry to the Honours program in Ecology and Sustainability specialisation can be at either at the beginning or the academic year (February) or at mid-year intake (July) to allow for field-based research with seasonal limitations.
Course Structure
The structure of these three honours courses is as follows:

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF4001 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
<td>Full Fee (AU$)</td>
</tr>
<tr>
<td>RBF4002 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

(48 credit points per semester)

BACHELOR OF SCIENCE (HONOURS) IN BIOMEDICAL SCIENCES (I)

Course Code: SHBM

Course Objectives
RBM4001 and RBM4002 Science Honours 1 and 2 will comprise a research project including two oral presentations, a literature review and the project thesis.

Honours Course Work
There will be two course work units comprising of Advanced Experimental Design and Statistics, and Research Conduct, Ethics and Training. In special cases undergraduate units of studies may be substituted for course work units when it is felt that a student would require further studies of a specialised nature. The lecture or reading programs that make up the course work units will be determined by student's preferences and will vary from time to time. Course work units will be assessed by oral presentations, written assignments or a written examination.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM4001 SCIENCE HONOURS 1</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
<td>Full Fee (AU$)</td>
</tr>
<tr>
<td>RBM4002 SCIENCE HONOURS 2</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>
Below are subject details for courses offered by the School of Biomedical Sciences in 2008. IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

**RFBI1500 GLOBAL ENVIRONMENTAL ISSUES**

**Campus** St Albans

**Prerequisites** Nil

**Content** Human population growth and measurement factors; population regulation in China and India; population growth momentum; environmental history and spectrum of environmental thought; environmental groups and their work; connections between social justice and environmental issues – education levels, status of women, human rights and relative levels of wealth, resource consumption and pollution in developing and developed countries; deforestation and biodiversity loss; food production – green and gene revolutions and the African experience; energy resources – a contrast of renewables and fossil fuels/nuclear; water and soil resources – appropriate agriculture and permaculture; chemistry and sources of indoor and outdoor air pollution – the enhanced greenhouse effect and depletion of stratospheric ozone; the role of traditional economics in environmental degradation.


**Class Contact** Four hours per week for one semester

**Assessment** Case study and assignments: 60 %; Examination: 40 %

**RFBI1600 AUSTRALIAN LANDSCAPES AND BIOTA**

**Campus** St Albans

**Prerequisites** Nil

**Content** To introduce students to the range of environments and landscapes that are present across the Australian continent, and the nature of the plants and animals that inhabit these landscapes. This will be achieved by: 1) discussing the factors that have shaped the various Australian environments, including geomorphological and climatic processes, and historical factors; 2) introducing the distinctive flora and fauna of Australia and the environmental pressures that have shaped the Australian biota; and 3) reviewing relationships between the biota and the environment. The subject will provide a foundation of knowledge about the Australian environment even for students not continuing in the biological sciences.

**Required Reading** To be advised


**Class Contact** Four hours per week for one semester, but comprising two hours of lectures each week and a series of all-day field trips.

**Assessment** Field work reports: 40%; Assignments: 20%; Examination: 20 %.

**RFBI1770 STRUCTURE AND FUNCTION**

**Campus** St Albans, City Flinders, Off Campus

**Prerequisites** Nil

**Co-requisites** Nil

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Identify the microscopic structures within cells;
2. Describe in detail cell structures and their respective functions;
3. Integrate biological information at the chemical and cellular levels;
4. Discuss basic microbiology with respect to broad categories of pathogenic organisms;
5. Explain the spread and transmission of infectious agents;
6. Explain host microbe interactions and how microbes cause disease;
7. Justify the importance of sterilization and disinfection;
8. Conduct sterilization and disinfection procedures to a level required for a clinical environment.

**Content** This unit comprises two modules: Module 1: Eukaryotic cell; Module 2: Microbiology. The eukaryotic cell: the structure and function of organelles, in particular the cell membrane, smooth endo-plasmic reticulum, Golgi apparatus, cytoskeleton and nucleus. Processes include cell-cell interactions, production and packaging, cell motion, meiosis and mitosis. Microbiology: microbial structure, categories of infective agents, normal flora, introduction to the major pathogens, transmission of infection, sterilization and disinfection, host and microbe interactions.


**Class Contact** Two (2) hours per week or equivalent for one semester comprising lectures and laboratory practicals. Practical sessions have a hurdle requirement of at least 90% attendance.

**Assessment** Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); laboratory reports (total 20%); one written assignment (20%); one 2-hour final written examination (80%).

**RFBI2610 FUNDAMENTALS OF ECOLOGY**

**Campus** St. Albans

**Prerequisites** RFB1310 Biology 1, RFB 1320 Biology2

**Content** History and nature of ecology; Ecology & evolution – natural selection & speciation, Niche concept – ecophysiology, limiting factors; Population biology – individuals, species & populations, population growth, demographics, life tables, age distributions, population regulation, intra- & interspecific competition, predation, parasitism, mutualism; Behaviour; Community – species diversity, species abundance models, succession, food chains, trophic relationships; Ecosystems – energy transfer, geochemical cycles, global patterns & processes; World biogeography & biomes; Palaeoecology

**Required Reading** To be advised by lecturer.

**Recommended Reading** To be advised by lecturer.

**Class Contact** Four hours per week for one semester, comprising two hours of lectures and two hours of practicals (mainly field excursions)

**Assessment** Field studies and assignments: 50 %; Examination: 50%.

**RFBI2620 AUSTRALIAN PLANTS**

**Campus** St. Albans

**Prerequisites** RFB1310 Biology 1, RFB1320 Biology 2

**Content** An understanding of: 1) the diversity and evolution of plants and fungi, with emphasis on Australian native plants and fungi; 2) the characteristic morphology and life history of the major plant groups and fungi; 3) the basic principles of the systemsatics of Australian plants including biological nomenclature, identification and classification; and 4) how the biogeography of Australian plants can be explained by their life history and to the history of the continent, particularly to an understanding of how and why that Australia has evolved a diverse and highly endemic primarily sclerophyllous flora where the forests and woodlands are dominated by two tree genera, Eucalyptus and Acacia.


Class Contact Four hours per week for one semester, comprising two hours of lectures and two hours of practical. Assessment Practical and assignments: 60 %; examination: 40 %.

RBF2630 COMMUNITY AND ENVIRONMENT
Campus St. Albans
Prerequisites Nil
Content Exploration of the various socially-based conceptual frameworks for understanding the range of environmental viewpoints in the community, and the consequences of these frameworks for practical environmental protection and repair. Practical experience in working with a wide range of community representatives on environmental protection and repair projects. Practical skills development in how to communicate with community groups and individuals, including clear, simple explanations, active and reflective listening, negotiation, consulting and drawing up and presenting project proposals. Insights into the range of skills and experience required to gain employment in environmental management fields, and the range of employment available.
Required Reading To be advised

Class Contact Four hours per week in total, timetabled as a block, and consisting of a mix of lectures, tutorials, practical workshops and site visits.
Assessment Assignment: 20 %; practical workshop and field reports: 30 %; final examination: 50 %.

RBF2640 AUSTRALIAN ANIMALS
Campus St. Albans
Prerequisites RBF 1310 Biology 1, RBF 1320 Biology 2
Content Diversity of animal life, with an emphasis on the Australian fauna: the science of systematics, including cladistic analysis; Bauplans; evolution and origin of biodiversity in marine and terrestrial environments; historical and ecological biogeography, including faunal regions and habitat types; ‘uniqueness’ of the Australian fauna.
Required Reading To be advised by lecturer.
Class Contact Four hours per week for one semester, comprising two hours of lectures and two hours of practical classes composed mainly of field excursions.
Assessment Practical: 50 %; Examination: 50 %

RBF2922 SCIENCE AND SOCIETY
Campus St Albans, Werribee.
Prerequisite(s) Nil
Content The subject aims to encourage students to appreciate modern scientific culture as historically unique phenomenon, and thus to enable them to analyse specific developments and events in modern society. The subject looks at the failure of philosophical attempts to establish a creative rather than ‘dull-but-honest’. Two case-studies are used: the development of Darwinism, and the transition from Newton’s theory of gravitation to Einstein’s theory of general relativity. The development of modern scientific culture is analysed in the following case studies in particular: China and Japan’s divergent responses to confrontation with Western culture, technological developments in Nazi Germany and Stalinist Russia, the structure and funding of American basic research, and the development of the nuclear industry. The teaching of science subject and popular perceptions of science will also be looked at.
Class Contact Four hours per week for one semester, comprising one two-hour lecture and one two-hour tutorial.
Assessment Assignments, 50%; semester examination, 50%. A satisfactory Assessment will require satisfactory attendance (80%) at tutorials.

RBF3530 ENVIRONMENTAL PHILOSOPHY
Campus St Albans
Prerequisite(s) Nil
Content Philosophy: a brief overview of Ancient, Medieval and Modern Western philosophy. Environmental Philosophy as the search for principles for guidance in conducting our lives in a practical way that is beneficial to the environment and as a spectrum of thought from Anthropocentrism to Ecocentrism. A focus onEcocentrism, in particular what informs Deep (or Transpersonal) Ecology and the role of nature-based religions and patriarchy in the development of Ecofeminism.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester
Assessment Assignments, 50%; examination, 50%.

RBF3540 LEADERSHIP AND THE ENVIRONMENT
Campus St Albans
Prerequisite(s) Nil
Content Three phases in the history of leadership studies: the characteristics or traits of leaders from studies done in the first half of this century; the thirty years of theories of what would lead to effective leader behaviour in certain situations; the 1980’s and after when a broader picture of what might explain leader success began to develop. The current place of ethics, morals, values, feelings and power as sources of information regarding leader behaviour. Leadership as an art and as a service – as a weaving of relationships rather than an amassing of information. The strong links which exist between holistic environmentalism and emerging leadership theory. Case studies from business, government and environmental organisations of successful leaders who show evidence of wholeness, care and service for the other.
Required Reading To be advised by lecturer.
Class Contact Three hours per week.
Assessment Assignments, 50%; examination, 50%.

RBF3600 AQUATIC ECOLOGY
Campus St. Albans
Prerequisites RBF 1310 Biology 1, RBF 1320 Biology 2, RBF 2610 Fundamentals of Ecology
Content This subject provides an overview to the ecology and management of freshwater, estuarine and marine ecosystems in southern Australia. The material covered includes: ecology of upland and lowland-floodplain rivers (including impacts of flow regulation and environmental water allocations); ecology of lakes and reservoirs (including algal bloom control and impacts of recreation); wetland ecology and management (including international conventions on waterbirds); seagrass, mangrove and saltmarsh ecology and management; significance of rocky shore habitats in southern Australia; estuarine ecology (with particular emphasis on Port Phillip Bay and the Gippsland Lakes) and environmental degradation and repair of aquatic systems.
Class Contact Four hours per week, comprising 1 x two hour lecture, 1 x one hour tutorial/directed learning and 2 x day-long field excursions.
Assessment Within-semester (on-going) Assessment at Weeks 6 and 13 (60 %) plus two field reports (40 %).
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

RBF3610 BIOSTATISTICS
Campus St. Albans
Prerequisites RMA1110 Mathematics for the Biological and Chemical Sciences 1 and RMA1120 Statistics for the Biological and Chemical Sciences 1
Content This subject aims to introduce students to the practical use of statistics in the biological, ecological and health sciences. Particular emphasis is given to experimental design and ‘real world’ use of statistical procedures. Material covered includes: Revision of statistical concepts and the significance of statistics/biometrics in biological/environmental analysis. Distributions and the nature of data; the use of correlation and regression in developing hypotheses. Sampling regimes and units, confounding variables, hypothesis testing, parametric versus non-parametric procedures and assumptions, post-hoc testing. Design tools for experimental and field collection of data; type-I versus type-II errors, statistical power and the use of statistical power in experimental design. BACI models and design issues; pseudoreplication and true replication. Optimisation of sampling regime for a given sampling unit and variance. Inferential procedures, multiple factorial designs, univariate versus multivariate procedures in biological and environmental programs.
Learning Outcomes On successful completion of the unit, it is expected that students will be able to: describe the main types of sampling distribution; generate appropriate descriptive statistics from data obtained through environmental investigation; utilise and apply techniques such as regression, correlation, univariate and multivariate analysis; critically evaluate experimental and statistical models; select appropriate statistical methods for the testing of hypotheses; generate multifactorial experimental designs; apply parametric and non-parametric methods to biometric data as appropriate; control for confounding variables in experimental investigations; recognise types of sampling error; interpret the output from statistical testing.
Required Reading Zar, J.H., 1996, Biostatistical analysis, (3rd Edition), Prentice Hall, USA.
Class Contact Four hours per week over one semester, comprising two hours of lectures and two hours of interactive practicals/tutorial per week.
Assessment Assignments: 30 %; Examinations: 70 %.

RBF3620 CONSERVATION AND SUSTAINABILITY
Campus St. Albans (offered subject to minimum enrolments in 2004)
Prerequisites RBF3130 Biology 1, RBF3132 Biology 2, RBF2610 Fundamentals of Ecology, or at the discretion of the subject co-ordinator.
Content The subject ties together, in both theoretical and practical ways, concepts and practices for maintaining biological diversity, and how these concepts and practices can be integrated with social and economic needs. The subject covers: the development of conservation theory and practice in Australia; extinction and its significance, including pathways to extinction; the meanings, levels and interpretation of concepts of biodiversity; ecological and adaptive management approaches to conservation and recovery, including design of reserves, setting priorities, off-reserve conservation and ex situ (captive breeding, reintroduction and translocation). Practical field studies and site visits will investigate the contributions of zoo’s, national and state parks, friends groups, councils and shires, other government agencies and private landholders to the conservation and recovery of plant and animal species, from insects to mammals, and from mushrooms to trees. The subject will also include practical appraisals of techniques used to determine integrity of ecosystems, landscapes and overall environment, the contributions made by biodiversity to ecosystem services and integrated methods for recovery and sustainable management of species and ecosystems.
Class Contact Four hours per week for one semester, comprising two hours of lectures and two hours of practical.
Assessment Practicals and assignments: 40%; examination: 60%.

RBF3630 ENVIRONMENTAL IMPACTS AND MONITORING
Campus St. Albans (offered subject to minimum enrolments in 2004)
Prerequisites RBF1310 Biology 1, RBF1320 Biology 2
Content This subject aims to introduce students to the ‘real world’ application of ecological studies, especially in the process of sustainable development. Topics covered will include: Overview of Australian natural resources subject to environmental degradation (e.g. land, soil, water, biota); The social and industrial factors responsible for degradation (e.g. erosion, water pollution, salinisation, habitat destruction, exotic species, extraction, biodiversity loss etc). The Environmental Impact Assessment process used to quantify impacts (e.g. role of consultants, the EII process itself); Approaches to monitoring environmental degradation and recovery (e.g. sampling design, monitoring procedures, rapid Assessment protocols, ANZECC guidelines); Mechanisms and approaches available to minimise impacts (reserve systems, limits of acceptable change technologies, financial tools, role of government departments). Particular emphasis is given to ‘hands on’ experience.
Class Contact four hours per week, comprising 1 x two hr lecture, 1 x two hr interactive tutorial/directed learning session (including group presentations).
Assessment Within-semester (on-going) Assessment at Weeks 6 and 13 (60 %) plus one case study report or project (40 %, including group presentation ).

RBF3640 TERRESTRIAL ENVIRONMENTS AND REHABILITATION
Campus St. Albans (offered subject to minimum enrolments in 2004)
Prerequisites RBF1310 Biology 1, RBF1320 Biology 2, RBF2610 Fundamentals of Ecology, or at the discretion of the subject co-ordinator.
Content The major types of ecosystems, including forests, woodlands, grasslands, tundra and desert. The biological limits and adaptations of several of these ecosystems, including approaches based on understanding of biology and ecology. Practical experience in rehabilitation projects.
Class Contact Four hours per week in total, timetabled as a block, and consisting of a mix of lectures, tutorials, practical workshops and site visits, including discussions with those currently employed in the field.
Assessment Final examination: 50 %; Report on field monitoring projects: 20 %; Workshop and practical reports: 30 %.
RBF3650 POLLUTION BIOLOGY

Campus St. Albans (this subject will first run in 2006)

Prerequisites RBF2610 Fundamentals of Ecology, RBF1310 Biology 1, RBF1320 Biology 2, Biometrics RBF3610, or subject co-ordinators discretion.

Content This subject aims to introduce students to the impact of pollutants on natural ecosystems. Topics covered include: Principles and concepts which apply to the analysis and evaluation of pollutant impacts on the natural environment. Experimental methodology employed in the evaluation of organism and ecosystem responses to pollutant exposure with special emphasis on statistical procedures which can be employed in evaluating impacts. Types of and significance of different groups of pollutants. Tolerance and susceptibility of organisms and biological systems to pollutants; pollution monitoring, biologic indicators and environmental stress; sequestering of exogenous compounds; partitioning; sources and environmental transport; uptake and depuration; case studies.

Required Reading To be advised


Class Contact Hours of lectures and two hours of practical.

Assessment Practical and assignments: 40 %; examination: 60 %.

RBF3660 INDIGENOUS SOCIETY AND ENVIRONMENTAL MANAGEMENT

Campus St Albans (offered to subject minor enrolments in 2004)

Prerequisites Nil


Assessment Folder plus Case Study/Video/Art Work/Story/Photo Essay; Contribution.

RBM1061 SAFETY 1

Campus St Albans

Prerequisites Nil

Co-requisites

Learning Outcomes The outcomes from studying this unit will be that students understand the fundamental concepts used in safety programs, hazard identification and occupational health and safety management. Students will recognise the scientific concepts that relate to mechanical, physical, chemical and biological hazards and access information from safety standards, guidelines, codes of practice and regulations on these hazards.

Content This unit will give a course overview to outline the knowledge, skills and abilities that are acquired by occupational health and safety persons through workplace experiences and how occupational health and safety is affiliated with many disciplines such as law, occupational hygiene, toxicology, ergonomics, organisational behaviour. The nature of safety in various occupational fields will be examined in the contexts of both historical and current developments. This unit will introduce the student to the classification hazards that will be linked with more foundation science topics to elaborate on the of sources of energy in various environments that can cause harm to people and property. Ways to control and reduce or prevent exposure to these hazards will also be described through safety standards, guidelines, codes of practice and regulations. Protection and emergency procedures will also be covered as part of this unit.

Required Reading Australian Dangerous Goods Code: Volume 1

Campus St Albans

Prerequisite(s) Nil

Learning Outcomes On successful completion of this unit students should be able to:

• explain, using examples, the structure and function of bones, joints, muscles, arteries, veins, lymphatics and nerves.
• understand the anatomy and histology of the structures of the abdomen
• understand the anatomy and histology of the structures of the pelvis and perineum
• problem solve common clinical problems, such as heart attack, diabetes, appendicitis, labour and delivery.

Content This unit of study introduces students to functional anatomy. After a brief introduction to bones, joints, muscles, vessels and nerves; students study gross, histological and some surface anatomy of the thorax, abdomen and pelvis. The following regions are studied: thoracic
cage, pleura and lungs, heart, mediastinal structures, abdominal wall, pelvic girdle, gastrointestinal organs, urinary organs and reproductive organs. The relevance of functional anatomy to health and healing will be highlighted. Topics studied in this unit of study may be interchanged with those in other Functional Anatomy units.


**Class Contact** Five hours per week, 3h lectures, 2h tutorial/practical

**Assessment** Topic Test x 2, 10%; Practical exam, 45%; Theory exam, 45%.

**RBM1101 BIOSCIENCE 1**

**Campus** St Albans

**Prerequisites** Nil

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, the student will:

1. Have a sound understanding of the chemical level, the cellular level, and the tissue level of the human organism. Students will also have a sound understanding of the anatomy and physiology of the musculoskeletal system, the nervous system, the endocrine system and the cardiovascular system.

2. Have a sound understanding of major pathophysiological processes within each system listed above.

**Content** This unit will contain:

1. **Organisation of the human body**
   - Introduction to the human body
   - The chemical level of organisation
   - The cellular level of organisation
   - The tissue level of organisation

2. **The principals of support and movement**
   - The skeletal system
   - Bone tissue, the axial skeleton, and the appendicular skeleton
   - Joints
   - Muscle tissue
   - Muscular system

3. **Control systems of the human body**
   - Nervous tissue
   - Spinal cord and spinal nerves
   - The brain and cranial nerves Sensory, motor and integrative systems
   - The special sensors
   - The autonomic nervous system
   - The endocrine system

4. **Maintenance of the human body**
   - The cardiovascular system:
   - The blood, the heart and blood vessels and hemodynamics
   - The lymphatic and immune system and resistance to disease


**Class Contact** Forty eight hours (48) over one 12-week semester, comprising of three (3) hours per week delivered as lectures and one (1) hour per week practical class delivered as laboratory or tutorial.

**Assessment** This unit has three (3) Assessment items, a one (1) hour written mid semester examination 25% (P1, W1, W2), four (4) laboratory reports 25% (P1, A1, C1, C2), and a three (3) hour written end of semester examination 50% (W1, W2, P1) . To obtain a pass in this unit all components of Assessment must be attempted and an aggregate mark of 50% must be attained.

**RBM1171 APPLIED NEUROMUSCULAR PHYSIOLOGY**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content** Students will gain an appreciation of those aspects of nerve and muscle function which form the basis of human movement. Topics will include: basic cell concepts, energy systems, physiology of the neuron, structure and function of muscle fibres control of muscle contraction; sensory mechanism, higher functions of the nervous system.

**Required Reading** To be advised by the lecturer.

**RBM1174 HUMAN PHYSIOLOGY**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content** The general aim of the subject is to give students an understanding of basic concepts in human physiology. The subject will comprise a description of basic cell structures and functions for generalised and specialised cells; outline co-ordinated body functions with specific applications to the cardiovascular, respiratory, musculoskeletal, neural, alimentary and renal systems. In addition, basic concepts in organic metabolism and energy balance will be considered.


**Class Contact** Three hours per week for one semester comprising two one-hour lectures per week and a two hour laboratory session every second week.

**Assessment** Practical 20%; topic tests 20%; examination 60%

**RBM1200 FUNCTIONAL ANATOMY OF THE LIMBS**

**Campus** St Albans

**Pre-requisite(s)** RBM1100 Functional Anatomy of the Trunk

**Learning Outcomes** At the completion of this unit students should be able to:

- understand the anatomy of the upper limb
- understand the anatomy of the lower limb
- problem solve common clinical problems, such as a dislocated shoulder or hip replacement surgery.

**Content** Students study gross anatomy of the upper and lower limbs. The following regions are studied in detail: pelvic girdle, gluteal region, hip, thigh, knee, leg, ankle and foot; pectoral girdle, shoulder, arm, elbow, forearm, wrist and hand. The relevance of functional anatomy to health and healing will be highlighted. Topics studied in this unit of study may be interchanged with those in other Functional Anatomy units.


**Recommended Reading** Nil.

**Class Contact** Five hours per week, 3hours lectures, 2hours tutorial/practicals.

**Assessment** Written assignment 25%; Practical exam, 20%; Theory exam, 55%

**RBM1211 BIOSCIENCE 2**

**Campus** St Albans

**Prerequisites** HFB1101 Bioscience 1

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, the student will:

1. Have a sound understanding of the anatomy and physiology of the respiratory system, the digestive system, metabolism, urinary system, and the reproductve systems.

2. Have a sound understanding of major pathophysiological processes within each system listed above and their relationship to paramedic practice.

**Content** This unit will contain:

1. Maintenance of the human body
   - The respiratory system
   - The digestive system
   - Metabolism
   - The urinary system
   - Fluid, electrolyte and acid base homeostasis
   - The reproductive systems

2. Microbiology and infection control
   - Fundamentals of microbiology
   - Host – microbe interactions
   - Control of micro-organisms

Class Contact Forty eight hours (48) over one 12-week semester, comprising of three (3) hours per week delivered as lectures and one (1) hour per week practical class delivered as laboratory or tutorial.  
Assessment This unit has three (3) Assessment items, a one (1) hour written mid semester examination 25%, four (4) laboratory reports 25%, and a two (2) hour written end of semester examination 50%. To obtain a pass in this unit all components of Assessment must be attempted and passed. Failed assessments may be re-attempted/re-submitted once only. Maximum possible marks to be obtained on any re-submission will be 50%. This unit is hurdle requirement.  
RBM1260 SAFETY 2  
Campus St Albans  
Prerequisite(s) Nil  
Co-requisites  
Learning Outcomes The outcomes from studying this unit will be that students will have been introduced to models of theories of accident causation as well as models and systems of accident control. They should be able to report, analyse and report on accidents and implement safety policies and programs. Also after completing this unit students should be able to follow the compensation and rehabilitative process that are set after stressors cause workplace injury in progression caring for the injured worker to and return to work programs.  
Content This unit will cover theories of accident causation, describe the process of accident investigation, and control measures that should be introduced. Surveys, inspections, audits, accident and injury reporting, system safety, safety science, Assessment of risk, management of risk and rehabilitation will be described and linked with discussion in the context of social, administrative and technical aspects of safety. How the person and their physical and social environment contribute toward the safety culture will also be described in this unit. This unit will also cover psychological hazards.  
Class Contact A two hour lecture delivered each semester week will cover the fundamentals of risk Assessment and management and workplace requirements for compensation and rehabilitation. In addition there will be a one hour lecture to cover theories of accident causation, and investigation, and analysis and reporting of accidents. Further Class Contact will involve a three hour tutorial every week of the semester.  
Assessment Assessment Tests 30% P1, H1, W1, A1 Three Essays 35% P2, I2, W2, A2, D2 Assignment workplace analysis 12.5% P2, I2, O2 Assignment safety systems 12.5% P2, I2, O2 Tutorial participation 10% P2, I2, O2  
RBM1501 FOUNDATIONS IN BIOMEDICAL SCIENCE A  
Campus St Albans  
Prerequisite(s) Nil  
Content A series of lectures and workshops that will provide students with an introduction to communication theory and professional practice. This will cover communication skills of summarising, synthesising, note taking, laboratory report and essay writing, researching and referencing. Students will be encouraged to develop critical thinking and self-editing skills. Oral presentation techniques such as debating, formal talks, impromptu presentations and small group presentations will be developed. Students will be encouraged to focus on the holistic nature of the communication process. Context specific materials about biomedical science will be delivered through lectures, video and seminars.  
Required Reading Handbook of Communication Skills for First Year Students in the Faculty of Science, Engineering and Technology.  
Recommended Reading Mohan T, et al. 2004 Communicating as Professionals, Thomson, Southbank  
Class Contact 2 x one hr lecture; 1 x two hr laboratory; 1 x two hr workshop.  
Assessment Synthesis (500 words), 5%; Essay (1500 words), 15%; Oral Presentations, 20%; Laboratory reports, 15%; Laboratory participation, 15%; Exam, 30%.  
RBM1502 FOUNDATIONS IN BIOMEDICAL SCIENCE B  
Campus St Albans  
Prerequisite(s) Nil  
Content This unit of study enables students to acquire the skills and techniques required to critically analyse written material, particularly scientific reports and to analyse scientific data. Topics include: basic mathematical principles, scientific notation, statistical principles, interpretation of figures, introduction to data, descriptive statistics: introduction to probability; normal distribution; the t statistic; hypotheses testing and ‘p’ values. Use will be made of statistical and other computer packages commonly used within biomedical sciences.  
Required Reading Strube P 2003 Bodyworks, 2nd ed. Prentice Hall; Utts & Heckard 2004 Mind On Statistics, 2nd ed. Thomson; Handbook of biophysics and biostatistics for biomedical science students in the Faculty of Science, Engineering and Technology.  
Class Contact Five hours per week, 3h lectures, 2h practicals/workshops.  
Assessment Laboratory Assessment tasks, 25%; Assignment, 25%; Biophysics test, 25%; Statistics test, 25%.  
RBM1510 HUMAN BIOSCIENCE 1A – PSYCHOLOGY  
Campus St Albans  
Prerequisite(s) Nil  
Content This unit provides a basic knowledge and understanding of human cells, tissues and organ systems. It also introduces chemical and physiological principles and relates these principles to the human body. Concepts of physiological regulation and homeostasis are discussed and applied to functions of body systems. This subject provides an overview of the structure and function of the human body.  
Required Reading To be advised by lecturers.  
Class Contact Seven hours per week comprising four hours lectures, three hours laboratory and/or tutorial.  
Assessment Tests and examinations, 55%; laboratory reports, laboratory tests and assignments, 45%.  
RBM1514 FUNCTIONAL ANATOMY 1  
Campus St Albans  
Prerequisite(s) Nil  
Co-requisite(s) RBM1518 Human Physiology 1  
Content This unit of study introduces students to functional anatomy. After a brief introduction to bones, joints, muscles, vessels and nerves; students study gross, histological and some surface anatomy of the head and neck and the back. The following regions are studied: skull and cranial cavity, brain and the associated nervous system, scalp and face, eye and ear, nasal and oral cavities, major structures of the neck, vertebral column and deep and superficial muscles of the back. The relevance of functional anatomy to health and healing will be highlighted. Topics studied in this unit of study may be interchanged with those of the unit of study Functional Anatomy 2 and/or 3.  
Class Contact Five hours per week, 3h lectures, 2h practicals.  
Assessment Topic Test x 2, 10%; Practical exam, 35%; Theory exam, 55%.
RBM1515 ANATOMY AND PHYSIOLOGY 1
Campus St Albans
Prerequisite(s) Nil
Content This unit provides students with a basic knowledge and understanding of the structure and function of human body. Cells and tissues are introduced. Basic concepts in chemistry and biochemistry are covered in relation to the human body. The bones, joints and muscles of the body are taught in an integrated way using a regional approach. The nervous system and endocrine system are discussed to highlight their regulatory role for control, co-ordination and communication. The physiology of nerve cells is also covered, and this is followed by a discussion of special senses, in particular sight, hearing and balance.
Recommended Reading To be advised by Lecturer.
Class Contact Hours Four hours per week for one semester comprising lectures, tutorials and laboratory work.
Assessment Test and assignment (20%); laboratory work/test (40%); theory examination (40%).

RBM1518 HUMAN PHYSIOLOGY 1
Campus St Albans
Prerequisite(s) Nil
Content The importance of homeostasis and the role of the neuro-endocrine system in maintaining equilibrium within the body is emphasised. The nervous system and endocrine system are introduced in an integrated way to highlight their regulatory role for control, co-ordination and communication. The nervous system will be represented as the body's most rapid means of maintaining homeostasis via sensations, integration and response to changes, both within the body and in the outside environment. The physiology of nerve cells will be used to introduce bioelectrical concepts. This provides the groundwork to support an understanding of the various types of cells within the body and their functions. The musculoskeletal system and cellular replication processes are covered. Topics studied in this subject may be interchanged with those of RBM1528 Physiology 2.
Required Reading Seeley, Stephens & Tate 2003, Anatomy and Physiology, 6th edn, McGraw-Hill.
Class Contact Five hours per week for one semester, comprising three hours of lectures, two hours of practical on alternate weeks and one hour tutorial class per week.
Assessment Practical reports/test and assignment/worksheets, 45%; test/examination, 55%.

RBM1519 HUMAN BIOSCIENCE 1: BODY STRUCTURE & FUNCTION
Campus St Albans
Prerequisite(s) Nil
Content In this subject, Human Bioscience will be introduced and placed in context with nursing in an integrated fashion. Content will include a brief overview of the organization of the human body; students will be introduced to the structure and functions of cells and the various types of tissues in the body. Basic concepts in chemistry and biochemistry will be covered providing the groundwork to support an understanding of the various types of cells and their functions within the body. Students are also introduced to microbiology and the importance of infection control. The importance of homeostasis is continuously highlighted and the role of the neuro-endocrine system in maintaining equilibrium within the body is emphasised. This will be followed by discussions of other body systems emphasizing the relationship between structure and function and their relevance to Nursing.

RBM1520 HUMAN BIOSCIENCE 2 – PSYCHOLOGY
Campus St Albans, Werribee
Prerequisite(s) Students would normally be expected to successfully complete RBM1510 Human Bioscience 1A.
Content This subject aims to enable the students to extend theoretical knowledge of normal human structure and function developed in RBM1510 Human Bioscience 1A by examining more complex integrated functioning of the various systems in health and comparing these with selected deviations from health. Students will be introduced to fluid and electrolyte dynamics, the role of membrane structures and capillary dynamics, and integration of the neural, endocrine, circulatory, respiratory, and renal sub-systems in maintaining fluid, electrolyte and acid-base balance. Metabolism, body temperature control and nutrition are examined. Microbiology is introduced.
Required Reading To be advised by lecturer.
Class Contact Six hours per week comprising three hours of lectures, three hours of laboratory and/or tutorials for one semester.
Assessment Test and examination, 55%; laboratory reports and assignments, 45%.

RBM1524 FUNCTIONAL ANATOMY 2
Campus St Albans
Prerequisite(s) RBM1514 Functional Anatomy 1 and RBM1518 Human Physiology.
Co-requisite(s) RBM1528 Human Physiology 2.
Content Students study gross, histological and some surface anatomy of the thorax, abdomen and pelvis. The following regions are studied: thoracic cage, pleura and lungs, heart, mediastinal structures, abdominal wall, pelvic girdle, gastrointestinal organs, urinary organs and reproductive organs. The relevance of functional anatomy to health and healing will be highlighted. Topics studied in this unit may be interchanged with those of the unit of study Functional Anatomy 2 and/or 3.
Class Contact Five hours per week, 3h lectures, 2h practicals.
Assessment Topic Test x 2, 10%; Practical exam, 35%; Theory exam, 55%.

RBM1525 ANATOMY AND PHYSIOLOGY
Campus St Albans
Prerequisite(s) Nil
Content This unit is to builds upon the introductory knowledge of human structure and function covered in RBM1515 Anatomy and Physiology 1 in order for students to gain an integrated understanding of human organs and body systems. The cardiovascular, respiratory, urinary, gastrointestinal and reproductive systems are placed in context with their overall regulation and co-ordination via the neuro-endocrine system. This provides an understanding of how homeostatic mechanisms regulate variables such as blood pressure, blood gas status, fluid and electrolyte balance and acid-base balance. The provision of nutrients to the body by the gastrointestinal system is integrated with the study of biochemistry and metabolism. An introduction to basic concepts of inheritance is followed by the study of the male and female reproductive systems.
Recommended Reading To be advised by Lecturer.
Class Contact Hours Four hours per week for one semester comprising lectures, tutorials and laboratory work.
Assessment Test and assignment (20%); laboratory work/test (40%); theory examination (40%).

RBM1528 HUMAN PHYSIOLOGY 2
Campus St Albans
Prerequisite(s) RBM1516 Physiology 1
Content This subject continues the study of the structure and functions of the body, using homeostatic regulation of the internal environment as the ongoing theme. The cardiovascular, respiratory, urinary, gastrointestinal and reproductive systems are placed in context with their overall regulation and co-ordination via the neuro-endocrine system. This provides an understanding of how homeostatic mechanisms regulate variables such as blood pressure, blood gas status, acid-base balance, fluid and electrolyte balance and blood glucose. The provision of nutrients to the body by the gastrointestinal system is integrated with the study of biochemistry and metabolism. An introduction to basic concepts of inheritance is followed by the study of the male and female reproductive systems. Topics studied in this subject may be interchanged with those of RBM1518 Physiology 1.

Required Reading Seeley, Stephens & Tate 2003, Anatomy and Physiology, 6th edn, McGraw-Hill.


Class Contact Five hours per week for one semester, comprising three hours of lectures, two hours of practical on alternate weeks and one hour tutorial class per week.

Assessment Practical reports/test and assignment/worksheets, 45%; test/examination, 55%.

RBM1530 HUMAN BIOSCIENCE 2 BODY STRUCTURE & FUNCTION

Campus St Albans

Prerequisite(s) RBM1519 Human Bioscience 1: Body Structure and Function

Content In this subject, Human Bioscience 2 (Nursing) will be continued in context with nursing in an integrated fashion. Anatomy, physiology and basic concepts in chemistry and microbiology will be taught in an integrated fashion. Content will expand previous knowledge of the organization of the human body, structure and functions of cells and the various types of tissues in the body. Further concepts in chemistry, microbiology, infection control, homeostasis and the role of the neuro-endocrine system in maintaining equilibrium within the body are emphasized. The nervous system and endocrine system are expanded to highlight their regulatory role for control, co-ordination and communication. This will be followed by discussions of other body systems emphasizing the relationship between structure and function and their relevance to Nursing.


Class Contact Four hours per week for 12 weeks of one semester; comprising of two hours of lectures and two or three hours of practical/tutorial class.

Assessment Practical/test/assignment,50%; Theory test/examination, 50%.

RBM1810 NUTRITIONAL BIOCHEMISTRY

Campus St Albans

Prerequisite(s) Nil.

Content Chemical bonding, water and buffers: structure-function relationships of macromolecules, including carbohydrates, proteins, lipids and nucleic acids; nutritional importance of essential amino acids and lipids; the role of biomolecules in transport around the body and the storage of energy; biomembranes; protein synthesis; major metabolic pathways.


Class Contact four hours per week for one semester comprising two hour lecture and two hour tutorial.

Assessment Two assignments, 1500 words each 50%; examination (3 hours), 50%.

RBM1820 NUTRITION, SOCIETY, AND COMMUNICATION

Campus St Albans

Prerequisite(s) Nil.

Content Fundamental principles of nutrition science, including the importance of the various food groups in a balanced diet; common cultural dietary practices; effect of cultural and socio-economic influences on dietary habits; common nutritional epidemics; media and communication tools; strategies and attributes of nutrition health campaigns; the potential impact of such campaigns; maintenance of a media communication portfolio.

Required Reading Handbook of communication skills for first year students in the Faculty of Health, Engineering and Science.


Class Contact four hours per week for one semester comprising two hours lecture, two hours tutorial.

Assessment Oral presentation, 20%; assignments(two of 1500 words), 40%; examination, 40%.

RBM1830 DIET THERAPY 1

Campus St Albans

Prerequisite(s) Nil.

Content Dietary Assessment techniques, case history taking to assess the dietary habits of clients, dietary nutrient requirements for a balanced and healthy diet, basic counselling skills with respect to the Assessment and evaluation of dietary habits and the communication of constructive strategies to clients, codes of ethical practice in dealing with clients.


Class Contact four hours/week for one semester comprising 3hours lecture, 1 hour tutorial.

Assessment Examination (3 hour), 50%; Clinic observation journal, 50%.

RBM1910 MICROBIOLOGY FOR CHINESE MEDICINE PRACTITIONERS

Campus St Albans

Prerequisite(s) Nil.

Content Types of micro-organism and their place in, on and around us; how micro-organisms grow and how their growth is prevented or controlled in clinical settings; micro-organisms as agents of disease in the individual and in the population; how the body defends itself against microbial invasion and the role of the health practitioner in preventing the spread of disease.


Class Contact Hours The equivalent of 36 hours for one semester comprising lectures, tutorials and laboratory practicals. 

Assessment Participation in practical sessions with at least 80% attendance unless well-documented acceptable reasons are provided (hurdle requirement); practical reports and laboratory work (30%); one topic test (15%); one 2-hour end-of-semester examination (55%). This unit is a hurdle requirement.

Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated Class Contact hours. Laboratory and practical sessions have a hurdle requirement of at least 80% attendance.

RBM2050 OCCUPATIONAL HYGIENE
Campus St Albans
Prerequisites RBM1061 Safety 1
Co-requisites
Learning Outcomes The outcomes from studying this unit will be that students use available resources to plan sampling strategies to measure workplace contaminants and have some understanding of the principles in the measurement process. The student should be able to report on the significance of levels of occupational contaminants or environmental conditions, based on the method of Assessment and the content of factors relating to the workplace environment at the time of sampling.

Content This unit will cover the methods for monitoring and sampling stressors in workplace environments. The occupational hygiene topics will more specifically focus on respiratory hazards (gases, aerosols, particulates), noise and thermal environments. It will describe the detection and measurement of these workplace stressors. This will be in the context of the planning the sampling strategy, and the analysis of a particular method used to describe the level of contaminant exposure which is matched with postulated consequential outcome to a worker. The statistical processing of data, as well as sensitivity and specificity of instruments and systems will be discussed to qualify the interpretation of results which affect the final report on the Assessment of stressors in workplace environments. To assess the level of risk comparative published exposure limit standards are described. Controls to reduce exposures will also be covered and the unit will discuss ventilation and personal protective equipment.

Class Contact One two hour lecture, one hour tutorial and a two hour practical class for each week of a semester.

Assessment Topic Questions 30% P1, I1, W1, A1 Assignment

RBM2060 ERGONOMICS
Campus St Albans
Prerequisites RBM1502 Fundamentals in Biomedical Sciences B and RBM1528 Human Physiology 2
Co-requisites
Learning Outcomes The outcomes from studying this unit will be that students will be able to resource and use information for evaluating human factors and apply ergonomic methodologies to report on improving workplace environments.

Content This unit shows the role of ergonomics in safety. This is by showing the scope and concepts of ergonomics and its application in occupational health and safety, the scope to rehabilitation, biomechanics, the scope and methods of anthropometry, the approach to energy expenditure in the workplace and work analysis. These approaches and methods are applied to product design and evaluation, assessment and design of the physical workplace, analysis of work activities, analysis and evaluation of work systems, injury management.

Class Contact One two hour lecture, one hour tutorial and two hour practical class for each week of a semester.

Assessment Tests 15% P1, I1, W1, A1 Three Essays 30% P2, I2, W2, A2, D2 Practical reports and presentations 45% P2, I2, O2 Tutorial participation 10%

RBM2061 OCCUPATIONAL HYGIENE SCIENCE
Campus St Albans
Prerequisite(s) Minimal requirement – completion of Diploma of Occupational Health and Safety (or equivalent)
Content This unit covers and reviews basic chemical, microbial and physical concepts, that relate to occupational hygiene. Particular attention is given to sampling strategies and the measurement of exposures that lead to energy transfer to organisms or disruption of energy within organisms.

Class Contact Three and half hour laboratory equivalents for 12 weeks and one hour tutorial equivalents delivered over 6 weeks online for one semester.

Assessment Assignments, tutorial topic questions and tests.

RBM2100 REHABILITATION ANATOMY
Campus St Albans
Pre-requisite(s) RBM1200 Functional Anatomy of the Limbs
Learning Outcomes At the completion of this unit students should be able to: understand and perform clinical tests on muscles and joints of the body.

Content The relevance of functional and clinical anatomy to health and healing will be highlighted through a detailed study of the mechanics and muscles affecting the movement of joints in the body. This information will be presented and highlighted through the study of a number of different areas including kinesiology, biomechanics, gait analysis, posture, massage, muscle testing, exercise, stretching, basic soft tissue techniques, and awareness through movement and posture. There will be a particular emphasis on muscle testing and surface anatomy. Topics studied in this unit may be interleaved with those in other Functional Anatomy units.

Required Reading Behnke R.S., 2000, Kinetic Anatomy, Human Kinetics Australia.
Recommended Reading Nil.
Class Contact Five hours per week for one semester; 3 hours lecture, 2 hours practical/tutorial.

Assessment Theory examination 55%, practical examination 20% written assignment 25%.

RBM2110 HUMAN BIOSCIENCE 3
Campus St Albans
Pre-requisite(s) RBM1530 Body Structure and Function
Learning Outcomes On successful completion of this subject, students should be able to: describe the major categories of pathophysiological processes which underlie common and important disease conditions, such as inflammation, infection, cellular injury and neoplasia; describe the major pathophysiological concepts of disease aetiology, risk factors, pathogenesis, acute and chronic conditions and complications; identify the environmental influences which contribute to various pathophysiological processes and relate these to disease prevention
as well as pathogenesis; Discuss the pathophysiology of commonly encountered and serious conditions of the cardiovascular, respiratory, renal and haematological systems; Discuss severe and life-threatening complications which may develop in particular disease conditions; Discuss the scientific basis for preventative interventions, diagnosis and management of disease conditions; and, Discuss basic principles of pharmacology and the scientific basis for the mode of action of commonly prescribed drugs.

Content
In this subject major concepts and principles of pathophysiology illustrating their relationship to a range of common/ important acute and chronic illnesses will be presented. This subject supports the topic in concurrent nursing units by providing a scientific basis for understanding disease processes such as cellular injury, inflammation, infection, neoplasia and shock; by elucidating the underlying mechanisms which result in clinical manifestations; and by presenting the rationales for therapeutic interventions. Microbiology will be discussed with reference to the growth and physiology of micro-organisms, their pathogenic potential and infection control. The pathophysiological principles underlying disorders of body systems will be discussed; for example, in cardiovascular pathophysiology, shock and cardiac failure will be examined. Other topics covered will include disorders of haematological, immunological, respiratory and systems genetic disorders such as cystic fibrosis; and conditions resulting in acid-base and fluid and electrolyte imbalances. The epidemiological basis for distribution of disease conditions in population sub groups (eg. Indigenous, migrant, socio-economic) will also be examined.

Required Reading
McCance, K.L. and Huether, S.E. (2002). Pathophysiology; the Biological Basis for Disease in Adults and Children. (4th Ed). Mosby, USA

Recommended Reading

Class Contact
Equivalent of 40 hours organised according to teaching mode used. Delivery of this subject is negotiated in relation to the students practicum commitments.

Assessment
Laboratory and topic tests 40%
Examination 60%

RBM2141 PHARMACOLOGY AND NUTRITION
Campus St Albans
Pre-requisite(s) BMI 1810 Nutritional Biochemistry.
Learning Outcomes At the conclusion of this unit the successful student will be able to: recall the functional foods commonly encountered in foodstuffs, and their nutritional roles; recall the major classes of prescription drugs, their therapeutic roles and contra-indications; explain the principles of pharmacodynamics; be aware of the potential for specific drug-nutrient interactions and be able to demonstrate ability to retrieve such published information; be aware of the potential effects of polypharmacy; recall the effects of selected psychotropics.

Content
This unit covers the nutritional roles of functional foods; the classification of prescription drugs and their therapeutic uses and contra-indications; pharmacodynamics; polypharmacy; psychotropics; drug-nutrient interactions.

Required Reading
Bryant B, Knights K; Pharmacology for Health Professionals.2007. 2nd ed. Elsevier, NSW

Class Contact 3 hrs/wk, made up of lectures, and tutorials/workshops
Assessment Exam 60% assignments (2) 40%

RBM2161 ERGONOMIC SCIENCE
Campus St Albans
Prerequisite(s) Minimal requirement – Completion of Diploma of Occupational Health and Safety (or equivalent)
Content
Ergonomics utilizes a number of contemporary inter-disciplines – anatomy and physiology, sociology and psychology, physics and engineering etc., which will extend and merge together toward solving ergonomic problems. Topics will include the maintenance and distribution or impact of energy in the body, application of forces in regard to human movement, the physiology of sense organs, work design, man/machine information exchange; psychological, social, and economic contributions to work. The subject will also cover qualitative measurements, task analysis and job design.

Required Reading

RBM2220 FUNCTIONAL ANATOMY OF THE HEAD AND BACK
Campus St Albans
Pre-requisite(s) BMI1100 Functional Anatomy of the Trunk

Learning Outcomes On successful completion of this unit students should be able to:
• understand the anatomy and histology of the structures of the head and neck
• understand the anatomy and histology of the structures of the back
• problem solve common clinical problems, such as stroke and injuries.

Content
Students study gross and histological anatomy of the head, neck and back. The following regions are studied: skull and cranial cavity, brain and the associated nervous system, scalp, face, eye, ear, nasal and oral cavities, major structures of the neck, vertebral column, spinal cord and nerves, deep and superficial back muscles. The relevance of functional anatomy to health and healing will be highlighted. Topics included in the unit may be interleaved with topics in other Functional Anatomy units.

Required Reading

Recommended Reading

Class Contact
Five hours per week for one semester comprising 2-3 hours lectures and 2-3 hours tutorial/practical.

Assessment
Topic tests 10%, Theory examination 45%, practical examination 45%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

the implications of reproductive interventions such as manual pollination or selective breeding.

Content

- Lectures • Context and overview
- Genetic diversity: single loci
- Genetic diversity: quantitative variation
- Large population: natural selection, adaptation, mutation and migration
- Small populations: loss of diversity, genetic drift, effective population size, inbreeding and inbreeding depression
- Captive populations: management, reintroductions, breeding and case studies
- Molecular tools
- Species biology: taxonomy, genetic distances, tree of life, phylogeography and phylolchnophony, consequences of hybridization, management of hybridization and kinship
- Phylogenetics: structure, gene flow, fragment and fragmentation, conservation units, management and viability analysis. Life states and extinction modelling.

Laboratory/ practical sessions
- DNA extraction
- Electrophoresis
- Determining ploidy levels
- Phylogenetics
- Polymerase Chain Reaction (PCR) methods for genetic analysis
- Inbreeding/outbreeding models
- Use of computer software for simulations (population viability analysis), and various genetic indices to determine phylogenetic relationships
- Field trips

Required Reading


Recommended Reading


Class Contact

Two hour written examination (40%), CGA: A2, P2, I2

Written assignment of 2000 words (30%). CGA: I2, P2, W2

Class Contact 40%

Two hour written examination (40%), CGA: A2, P2, I2

Written assignment of 2000 words (30%). CGA: I2, P2, W2

RBM2210 HUMAN BIOSCIENCE 4

Campus St Albans

Pre-requisite(s) RBM2110 Human Bioscience 3

Learning Outcomes

On successful completion of this subject, students should be able to:

- Describe the major pathophysiological concepts of disease aetiology, risk factors, pathogenesis, acute and chronic conditions and complications; Identify the environmental influences which contribute to various pathophysiological processes and relate these to disease prevention as well as pathogenesis; Discuss the pathophysiology of commonly encountered and serious conditions of the nervous, endocrine, musculoskeletal, gastrointestinal and reproductive systems; Discuss severe and life-threatening complications which may develop in particular disease conditions; Discuss the scientific basis for preventative interventions, diagnosis and management of disease conditions; and Discuss basic principles of pharmacology and the scientific basis for the mode of action of commonly prescribed drugs.

Content

In this subject major concepts and principles of pathophysiology illustrating their relationship to a range of common/immediate acute and chronic illnesses will be presented. This subject supports the topic in concurrent nursing units by providing a scientific basis for understanding disease processes. The pathophysiological principles underlying disorders of body systems will be discussed; for example, atherosclerosis and the nervous, endocrine, gastrointestinal, musculoskeletal and reproductive systems will be examined. The epidemiological basis for distribution of disease conditions in population sub-groups (eg. Indigenous, migrant, socio-economic) will also be examined.

Required Reading


Recommended Reading


Class Contact

Equivalent of 40 hours organised according to teaching mode used. Delivery of this subject is negotiated in relation to the students practicum commitments.

Assessment

Topic tests 40%
Examination 60%

RBM2218 PRACTITIONER HEALTH 2

Campus St Albans

Prerequisites Bioscience 1 & 2

Co-requisites

Learning Outcomes

On successful completion of this unit, the student will:

1. Have a sound understanding of the key concepts and definitions related to nutrition
2. Define the various essential nutrients, and identify the chemical compositions of those nutrients
3. Understand the role energy plays, and identify the energy-yielding nutrients available to the human body
4. Understand the concepts of digestion, absorption and transportation in relation to nutrition
5. Assess food choices against recommended dietary intakes, and implement appropriate diet planning for health
6. Develop an understanding and practical application of nutrition across the lifespan

Content

This unit will contain:

1. Overview of Nutrition
2. Digestion, Absorption and Transport
3. The Carbohydrates: Sugars, Starches and Fibre
4. The Lipids: Triglycerides, Phospholipids and Sterols
5. Protein: Amino Acids
6. Metabolism
7. Vitamins: Water Soluble and Fat Soluble Vitamins
8. Minerals: Major Minerals and Trace Minerals
9. Diet and Health:
   - Food Choices
   - Diet Planning
   - Food Labels
   - Diet and the Shift Worker
10. Lifelong Nutrition:
    - Children
    - Adolescence
    - Pregnancy/Lactation
    - Elderly

Required Reading

Whitney, E.N. and Rolfes, S.R Understanding Nutrition. West Publishing Company: USA

Recommended Reading

Campus St Albans

Forty-eight (48) hours over one 12-week semester, comprising three (3) hours per week delivered as lectures and one (1) hour per week practical class delivered as laboratory or tutorial.

Assessment

This unit has three (3) Assessment items: consisting of a two thousand (2000) words assignment worth 20% of total mark, the completion and evaluation of a food consumption diary for one-month across the lifespan worth 50% of total mark. To obtain a pass in this unit all components of Assessment must be attempted and passed. Failed assessments may be re-attempted/re-submitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. This unit is a hurdle requirement.
RBM2221 NUTRITIONAL BIOCHEMISTRY
Campus St Albans
Pre-requisite(s) RMB1810 Nutritional Biochemistry
Learning Outcomes At the conclusion of this unit the successful student will be able to: recall the major metabolic pathways and their essential components, and describe their integration and regulation; recall the mechanisms of gene expression, and the various potential sites of disease causation; recall and explain the metabolic roles of micronutrients and dietary antioxidants; explain the mechanisms of enzyme action and inhibition; explain the physiological consequences of important genetic diseases; explain the action of ligands, antagonists and receptors and how these have regulatory roles in metabolism; recall the neuro-endocrine influences on metabolic regulation; recall the metabolic transformations of steroid and other major hormones; explain the principles underlying laboratory medicine.
Recommended Reading Bender D.A., 1997. Introduction to Nutrition and Metabolism. 2nd ed. Taylor and Francis. UK
Class Contact 5 hrs/wk; comprising 3 hrs lecture and 2hrs tutorial/workshop; or equivalent.
Assessment Examination 60% case studies reports (2) 20% assignments (2) 20%.

RBM2260 DIET AND NUTRITION
Campus St Albans
Prerequisite(s) RMB1528 Human Physiology 2 or equivalent
Content This subject will demonstrate the relationships between gastrointestinal tract, diet and human health. The subject examines the gastrointestinal structure and function, body composition, anthropometry, chemical nature of the nutrients, and their roles in body structure and function, energy intake and regulation, metabolism of nutrients, nutritional requirements under various environmental and physiological states, diet and disease, dietary guidelines, hormonal control of digestion, vitamins as antioxidants, nutrition and prevention of disease, role of intestinal flora in nutrition.
Required Reading To be advised by lecturer.
Class Contact Six hours per week for one semester comprising three hours lecture, two hours laboratory and one hour tutorial.
Assessment Tests, 20%; laboratory reports, 30%; final examination, 50%.

RBM2261 PUBLIC AND ENVIRONMENTAL HEALTH
Campus Saint Albans
Prerequisite(s) Minimal requirement – Completion of Diploma of Occupational Health and Safety (or equivalent) OR Completion of Level 1 BSc Biomedical Sciences (or equivalent)
Content The decisions a society makes about its public and environment health are based on scientific information to assess the degree and distribution of its risks. These are measures of the determinants of risks the strategies to reduce or remove risk reflect the values of the society. These values are expressed in its customs and laws. The sciences underlying the environmental and public laws include not only biology and chemistry, but others such as psychology, sociology and economics. The role of the public health political process is critically dependent on measurements of health and illness, the compromise between what is desirable and the balance of communal wealth with the perceived impacts of these in drafting public and environmental health laws and their implementation.
Class Contact Two hour online lecture and one hour tutorial delivered online per week for one semester.
Assessment Assignment, test and tutorial questions and tests.

RBM2361 SAFETY PRACTICE
Campus St Albans
Prerequisite(s) RMB2161 Ergonomic Science (equivalent) OR Completion of Level 1 BSc Biomedical Sciences (or equivalent)
Content Skills in making the Occupational Health and Safety unit of a business become part of the organization. These require that there is sufficient understanding of ergonomics – to achieve optimum productivity and cost efficiency and minimum risk of injury, quality management, environmental affairs, behavioural safety and basic financial management.
Class Contact Two hour lecture and one hour tutorial equivalents delivered online per week for one semester.
Assessment Assignments, tutorial topic questions and tests

RBM2365 MEDICAL MICROBIOLOGY
Campus St Albans
Prerequisites RMB1528 Human Physiology 2 or equivalent.
Co-requisites
Learning Outcomes
Content Topics include: nature and classification of micro organisms and their growth requirements, microbial genetics, normal flora, host defense mechanisms, immunoresponse, host microbe interaction, infection, sterilisation, disinfection, asepsis, antisepsis, sources and mode of transfer of infectious agents and the compromised host, principles of safe clinical practice, antibiotics, epidemiology, analytical methods and food safety. To investigate application of microorganisms in medicine, industry and biological work products.
Recommended Reading Madigan, MT, Martinko, JM and Parker, J 2003 Brock Biology of Micro organisms. Prentice Hall, Upper Saddle River, NJ
Class Contact Four hours per week for one semester, 2-3 hours lectures, 1-2 hours tutorial/laboratory.
Assessment Topic test, 10%; Laboratory reports, 30%; End of semester examination, 60%.

RBM2461 WORKPLACE PLACEMENT A
Campus St Albans
Prerequisites RMB1061 Safety 1, RBM2061 Safety 2, BLO2233 Health and Safety Law
Co-requisites
Learning Outcomes
Content The outcomes from studying this unit will be that students apply OHS legislation(s) and recognised workplace OHS policies to maintain safety systems and understand the requirement to control hazards and protect workers so as to reduce injury. They will show some understanding of the role of the process for rehabilitation of injured workers and return to work programs.
Class Contact Two hour lecture and one hour tutorial equivalents delivered online per week for one semester.
Assessment Assignments, tutorial topic questions and tests
RBM2517 HUMAN BIOSCIENCE 3
Campus St Albans
Prerequisite(s) RBM1530 Human Bioscience 2.
Content The presentation of major concepts and principles of pathophysiology; illustrating their relationship to a range of common/important acute and chronic illness. This subject supports the topics in concurrent nursing units by providing a scientific basis for understanding disease processes such as cellular injury, inflammation, infection, and shock; by elucidating the underlying mechanisms which result in clinical manifestations; and by presenting the rationale for therapeutic interventions. Microbiology will be discussed with reference to the growth and physiology of micro-organisms, their pathogenic potential, infection control and antibiotic treatment. The pathophysiological principles underlying disorders of major body systems and subsystems will be discussed; for example, in cardiovascular pathophysiology, shock, cardiac failure, hypertension and atherosclerosis will be examined. Other topics covered may include haemostasis; the respiratory system, renal system, and fluid and electrolyte imbalances, however specific systems in this subject may be interchanged with those in the fourth semester subject as appropriate.
Subject Hours 40 hours per semester of lectures and tutorial.
Assessment Test, 30%; examination, 70%.
RBM2528 PATHOPHYSIOLOGY IN MIDWIFERY
Campus St Albans
Pre-requisite(s) Anatomy & Physiology 1 & 2
Content This unit of study will introduce pathophysiological concepts, principles and disease processes, illustrating their relationship to a range of common and important acute and chronic disease conditions, relevant to midwifery practice. The aims of the subject are: to provide a scientific basis for understanding disease processes such as cellular injury, inflammation and shock; to elucidate the underlying mechanisms which result in clinical manifestation; and to present the rationale for therapeutic interventions. Microbiology will be discussed with reference to the pathogenetic potential and infection control of microorganisms. The pathophysiological principles underlying disorders of body systems will be discussed with an emphasis on midwifery; for example, in cardiovascular pathophysiology: hypertensive disorders of pregnancy and shock associated with blood loss will be examined. The student is also introduced to principles and processes underlying infection control in obstetrics and gynaecology.
Subject Hours 56 hours comprising lectures (3 hours/week); laboratories/tutorial (1 hour/week).
Assessment 1. Test 15%, Class Contact 15%, Examination 70%.
RBM2524 FUNCTIONAL ANATOMY 3
Campus St Albans
Prerequisite(s) RBM1580.
Content The relevance of functional anatomy to health and healing will be highlighted by studying to clinical anatomy, kinesiology, biomechanics, gait analysis, posture, massage, muscle testing, exercise, stretching, basic soft tissue techniques, and awareness of function. The body will be considered as a whole, with particular emphasis on the musculoskeletal and neuromuscular systems. Topics studied in this subject will be integrated with those of the subject RBM1514 Functional Anatomy 1 and RBM1580 Functional Anatomy 2.
Class Contact Sixteen hours for one semester.
Assessment Theory examination 55%, practical examination and oral examination 45%.
RBM2527 HUMAN BIOSCIENCE 4
Campus St Albans
Prerequisite(s) RBM2517 Human Bioscience 3.
Content This subject furthers the understanding of pathophysiological principles and disease processes introduced in RBM2517 Bioscience 3. Topics will include neoplasia, and disorders of the nervous, endocrine and musculoskeletal systems and gastrointestinal tract. Disorders of the reproductive tract including infertility will be presented. Important genetic disorders such as cystic fibrosis and their modes of inheritance will also be examined. But this Content may be interchanged with systems listed in the third semester subject.
Subject Hours 40 hours per semester of lectures and tutorial.
Assessment Test, 30%; examination, 70%.
RBM2530 PATHOPHYSIOLOGY 1
Campus St Albans
Prerequisite(s) RBM1520 or RBM1525 or equivalent
Content This subject aims to provide students with an understanding of the control and co-ordination of body systems and the effects of disturbances to body functions. The mental status and some psychosocial factors associated with these processes will be discussed. Students are introduced to major pathologic processes which may affect all parts of the body. Topics include tissue injury, inflammation and repair, normal immune function and deviations from normal, cancer from the molecular level to the whole person, neural and endocrine dysfunction including impaired cognition such as dementia and impaired co-ordination and control. In the laboratory, students will be introduced to basic laboratory techniques and apply scientific principles to the Assessment of dysfunction in humans. Students are also introduced to the research literature, research
The aim of this subject is to provide a foundation in biochemical principles with special emphasis on medical and nutritional applications. Firstly, foundations of biochemistry will be covered, e.g., biological buffers, structures of amino acids, nucleotides, carbohydrates, proteins, vitamins and cofactors. Other topics covered include enzymes, bioenergetics, and carbohydrate metabolism pathways. The practical component (compulsory), consisting of experimental sessions related to the theoretical topics covered in the lectures, will allow students to develop manual, observational, and recording skills.

**Required Reading**

**Recommended Reading**
Lehninger, Nelson and Cox. Principles of Biochemistry. Other textbooks as recommended by the lecturer.

**Class Contact**
Four per week, comprising two hours of lectures and three hours of practicals/tutorials for one semester.

**Assessment**
Practical Work: 40%; Final Examination: 60%

---

**RBM2560 MEDICAL BIOCHEMISTRY**

**Campus** St Albans

**Prerequisite(s)** RBM1518 Human Physiology 1, RCS1120 Chemistry for Biomedical Sciences B.

**Content** The aim of this subject is to provide a foundation in biochemical principles with special emphasis on medical and nutritional applications. Firstly, foundations of biochemistry will be covered, e.g., biological buffers, structures of amino acids, nucleotides, carbohydrates, proteins, vitamins and cofactors. Other topics covered include enzymes, bioenergetics, and carbohydrate metabolism pathways. The practical component (compulsory), consisting of experimental sessions related to the theoretical topics covered in the lectures, will allow students to develop manual, observational, and recording skills.

**Required Reading**

**Recommended Reading**
Selected material drawn from the following:

**Class Contact**
Seven hours per week comprising three hours of lectures, three hours of laboratory and one one-hour tutorial for one semester.

**Assessment**
Test and examinations, 50%; practical work, 35%; Assignment, 15%. Students are required to obtain a satisfactory grade in all components of the Assessment to obtain a pass grade.

---

**RBM2560 MEDICAL BIOCHEMISTRY**

**Campus** St Albans

**Prerequisite(s)** RBM1518 Human Physiology 1, RCS1120 Chemistry for Biomedical Sciences B.

**Content** The aim of this subject is to provide a foundation in biochemical principles with special emphasis on medical and nutritional applications. Firstly, foundations of biochemistry will be covered, e.g., biological buffers, structures of amino acids, nucleotides, carbohydrates, proteins, vitamins and cofactors. Other topics covered include enzymes, bioenergetics, and carbohydrate metabolism pathways. The practical component (compulsory), consisting of experimental sessions related to the theoretical topics covered in the lectures, will allow students to develop manual, observational, and recording skills.

**Required Reading**

**Recommended Reading**
Lehninger, Nelson and Cox. Principles of Biochemistry. Other textbooks as recommended by the lecturer.

**Class Contact**
Four per week, comprising two hours of lectures and three hours of practicals/tutorials for one semester.

**Assessment**
Two essays, 30% each; one tutorial presentation/debate, 25%; tutorial attendance and participation, 15%.

---

**RBM2570 PHYTOPHARMACEUTICS**

**Campus** St Albans

**Prerequisite(s)** RBM 1525 Anatomy and Physiology 2 or equivalent

**Learning Outcomes**
Demonstrated knowledge of basic pharmacokinetics, concepts of LD50 and toxicity, and drug-nutrient interactions. Demonstrated knowledge of the major groups of plant materials commonly used in complementary therapies, and indications for their use. Awareness of the potential for drug/herb/nutrient interactions.

**Content**
Basic pharmacokinetics, LD50, toxicity, phytopharmacology, plant materials commonly used in therapy, and indications for their use. Basis for drug/herb interactions with nutrients.

**Required Reading**
Kanagaratnum N, Botany Monograph. Victoria University, St Albans, 2005

**Recommended Reading**

**Class Contact**
Four hrs per week for one semester, or equivalent

**Assessment**
Assignment, 2000 words, 40%
Examination, 2 hrs, 60%

---

**RBM2610 BIOMEDICAL SCIENCES AND SOCIETY**

**Campus** St Albans

**Prerequisite(s)** Completion of a full first year of tertiary study which must include two semester units in biology/human physiology/human bioscience and two semester units in either psychology or communications or foundations/knowledge.

**Content** The subject examines images of the human body in society with particular reference to health and disease. There are several themes within this subject. The first theme examines how biomedical science defines health and disease, sanity and mental illness and influences our concepts of the human body. The second theme provides a brief introduction to the evolution of humans and the evolution of consciousness, drawing upon Darwinian theory. Questions such as what it means to be human, what consciousness is and whether there are biologically determined roles for men and women may be discussed. The human genome project will be examined. The third theme is the current image of the human body in society with respect to what is considered healthy and what is considered to be acceptable modification of the human body. Topics which may be discussed here include body image disorders, cloning, tissue engineering, and xenotransplantation.

**Required Reading**

**Class Contact**
Four hours per week comprising two one hour lectures and one two hour tutorial/seminar session for one semester.

**Assessment**
Two essays, 30% each; one tutorial presentation/debate, 25%; tutorial attendance and participation, 15%.
RBM2750 NUTRITION
Campus Werribee
Prerequisite(s) RBF1310 Biology 2 or equivalent. Students would be expected to have studied or undertaken concurrent study in RBF2520 Biochemistry 1.

Content
The subject aims to provide an introduction to the principles of human nutrition as a background for further studies in Food Technology (units RBF3731 and RBF3732), to enable students to appreciate the nutritional consequences and responsibilities associated with the provision, processing and development of food and food products. This subject examines: body composition and anthropometry; nutrient requirements and role in body structure and function; energy intake and expenditure; food and nutrient supply; nutritional requirements under different environmental and physiological states; diet and health; dietary guidelines; dietary investigations and special dietary foods.

Required Reading

Class Contact
Four hours per week for one semester comprising three hours of lectures and one hour of tutorials.

Assessment
Assignments, 30%; final examination, 70%.

RBM2800 CARDIORESPIRATORY AND RENAL PHYSIOLOGY
Campus Footscray Park
Prerequisite(s) RMB1518 Human Physiology 1 and RMB1528 Human Physiology 2.

Content
This subject aims to provide students with an understanding of the function, control and co-ordination of the cardiovascular, respiratory and renal systems. The subject will examine cardiac, pulmonary and renal function and normal circulatory, respiratory and renal dynamics.

An overview of the co-ordination of these systems will be achieved through an examination of the mechanisms involved in maintaining fluid and electrolyte balance including; the role of membrane structures and capillary dynamics, and the integration of neural, endocrine function in the control of cardiovascular, respiratory and renal systems. Homeostatic control of the cardiac, pulmonary and renal systems will also be examined by investigating their responses to stresses, including exercise, high altitude, increased temperature, spaceflight and aging.

Required Reading

Recommended Reading

Class Contact
Six hours per week for one semester comprising three hours of lectures and three hours of practical and/or tutorial per week.

Assessment
Semester examination, 60%; practical reports, 20%; assignment, 20%.

RBM2850 NUTRITIONAL THERAPEUTICS A
Campus St Albans
Prerequisite(s) RMB1820 Nutrition, Society and Communication; RMB1810 Nutritional Biochemistry; RMB1830 Diet Therapy.

Content
Normal GIT function; signs and pathophysiology of GIT dysfunction; lifestyle effects on normal function; effects of stress on function; pathogenesis of untreated signs and symptoms; nutritional support of liver function; clinical laboratory evaluation of GIT; nutrients required for normal GIT function; use of dietary supplements to restore normal GIT function; contraindications to the use of food supplements.

Required Reading

Recommended Reading

Class Contact
Four hours per week for one semester comprising two hours lecture, two hours tutorial/workshop.

Assessment
Examination (3 hours), 50%; case history, 50%.

RBM2855 NUTRITIONAL THERAPEUTICS B
Campus St Albans
Prerequisite(s) RMB 1830 Diet Therapy 1; RMB 2850 Nutritional Therapeutics A.

Content
Symptoms of system dysfunction in the following body systems – skin, respiratory system, nervous system, circulatory system, genito-urinary system, immune system, musculoskeletal system and hormonal system; using observation and evaluating case histories; working from case history records; identification of nutritional deficiency within a patient's case history; prioritising treatment, including the use of dietary supplements; lifestyle effects that may flow from the treatment; lifestyle effects on normal function.

Required Reading

Recommended Reading

Class Contact
Four hours per week for one semester comprising two hours lecture, two hours tutorial/workshop.

Assessment
Examination (3 hours), 50%; case history, 50%.

RBM2911 PATHOPHYSIOLOGY 1
Campus St Albans
Prerequisite(s) RMB1525 Anatomy And Physiology; Or Equivalent.

Student Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Describe the key milestones indicative of normal infant and childhood development;
2. Briefly describe typical age-related biological changes found in the adolescent and young, middle-aged, older-aged and frail-aged adult;
3. Describe the signs and symptoms of common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and immunological systems;
4. Describe the pathophysiology and immunology of common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and lymphatic systems;
5. State the routine clinical laboratory, radiology and other functional tests for common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and lymphatic systems;
6. List classes of drugs and other treatment modalities used for common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and immunological systems;
7. Predict the typical outcomes, with and without treatment, of common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and immunological systems;
8. Outline the basic epidemiology of common conditions and diseases affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and immunological systems;
9. Demonstrate development of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
Emphasis on fundamental pathophysiological processes affecting body and cellular systems; introduction to acute and chronic conditions and common and rare disease profiles affecting the cardiovascular, respiratory, gastrointestinal, hepatic, renal, endocrine and immunological systems; presentation and aetiology of common conditions affecting those systems across the lifespan; diagnostic and treatment regimes and outcomes relevant to those systems; pertinent medical terminology and medical case note reporting.

Required Reading

Pathophysiology made incredibly easy! (3rd ed.). Lippincott Williams and Wilkins.

Class Contact Hours Six hours per week or equivalent for one semester comprising lectures, tutorials and practicals. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated Class Contact hours.

Assessment: Participation in practical sessions with at least 80% attendance unless well-documented acceptable reasons are provided (hurdle requirement); two assignments (1500 words each) (20% each); one 3-hour examination (60%). This unit is a hurdle requirement.

Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated Class Contact hours. Practical sessions have a hurdle requirement of at least 80% attendance.

RBM2912 PATHOPHYSIOLOGY 2
Campus St Albans
Prerequisite(s) RBM2911 Pathophysiology 1; or equivalent
Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
1. Describe the signs and symptoms of common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
2. Describe the pathophysiology and immunology of common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
3. Describe the main types of commonly-presenting cancers, and outline the cancer staging and descriptors currently in use;
4. Outline the characteristic presentations of and pathophysiological explanations for common psychiatric and common degenerative conditions;
5. State the routine clinical laboratory, radiology and other functional tests for common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
6. List classes of drugs and other treatment modalities used for common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
7. Predict the typical outcomes, with and without treatment, of common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
8. Outline basic medical information pertinent to death and dying in the workplace;
9. Outline the basic epidemiology of common conditions and diseases affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems;
10. Demonstrate development of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Emphasis on fundamental pathophysiological processes affecting body and cellular systems; introduction to acute and chronic conditions and common and rare disease profiles affecting the reproductive, urogenital, nervous, skin and musculoskeletal systems; presentation and aetiology of common conditions affecting those systems across the lifespan; diagnostic and treatment regimes and outcomes relevant to those systems; skills for communicating with special patient groups; pertinent medical terminology and medical case note reporting.


Class Contact Hours Six hours per week or equivalent for one semester comprising lectures, tutorials and practicals. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated Class Contact hours.

Assessment: Participation in practical sessions with at least 80% attendance unless well-documented acceptable reasons are provided (hurdle requirement); two assignments (1500 words each) (20% each); one 3-hour examination (60%). This unit is a hurdle requirement.

Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated Class Contact hours. Practical sessions have a hurdle requirement of at least 80% attendance.

RBM3061 EPIDEMIOLOGY
Campus St Albans
Prerequisite(s) RBM2061 Occupational hygiene Science and RBM2161 Ergonomic Science or equivalent subjects OR Completion of Level 1 BSc Biomedical Sciences (or equivalent)

Content: This unit will introduce basic concepts of epidemiology. Some statistics will be covered. – Asking a question – what information do you need?, designing a study, testing hypotheses, designing forms and questionnaires for studies, setting up the data file, summarising data, from sample to population, testing hypotheses about independence, testing hypotheses about confidence, measuring association. The subject topics will describe types of epidemiological study, the research design and the advantages and disadvantages of each study type and covers the measurement of indicators of disease. Other topics covered include reviewing studies that show the causative factors relating to specific diseases; measurement of the association between causative factors and disease; the advantages and disadvantages of different types of epidemiological study; epidemiological findings to show the degree of risk associated with exposure to specific hazards in industry; and the impact of chance, bias and confounding on findings of epidemiological studies.


Class Contact: Two-hour lecture and one hour tutorial equivalents delivered online once per week for one semester.

Assessment: Assignment, tutorial topic questions and test

RBM3101 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR CONSERVATION & HEALTH
Campus St Albans
Prerequisite(s) Completion of core second year units in Ecology and Sustainability (RBF2610 Fundamentals of Ecology, RBF2640 Australian animals, RBF2620 Australian Plants) or in Biomedical Sciences (RBM2260 Diet and Nutrition, RBF2250 Pathophysiology 1, RBF2540 Pathophysiology 2).

Co-requisites: RBM2161 Ergonomic Science or equivalent subjects OR Completion of Level 1 BSc Biomedical Sciences (or equivalent)

Content: GIS software applications in common use. Methods for data collection and entry, specific plotting and mapping of integrated data. The interpretation of complex temporal and spatial data. Practical applications of GIS including the use of data from programs that monitor and manage endangered species in the wild.
The case of risk management.


Class Contact: Four hours per week comprising two hours of lecture and two hours of workshops providing hands on experience with data collection and GIS.

Assessment: Laboratory reports and computer exercises (30%). CGA: P3, I3, O2, C2. Written Assignment of 2500 words based on analysis and discussion of GIS data: 40%. I3, P3, W3, A3. Examination (1.5 hours): 30%. The examination will assess the main theoretical concepts underlying the applications of GIS discussed throughout the unit. CGA: I3, A2.

RBM3161 TOXICOLOGY
Campus: St Albans
Prerequisite(s): RBM2061 Occupational Hygiene Science (or an equivalent subject) OR RBM2530 Pathophysiology 1 (or equivalent).

Content: Topics covered in this subject include mechanisms of action, biotransformation pathways and metabolic bioactivation, toxicokinetics and protection of cellular toxicity by antioxidants. Descriptions of genotoxins, teratogens and carcinogens are included with topics showing specific organ toxins.


Class Contact: Two hour online lecture and one hour tutorial equivalents delivered online per week for one semester.

Assessment: Based on assignments, tutorial topic questions and essays.

RBM3171 ENDOCRINOLOGY AND REPRODUCTION
Campus: Footscray Park, St Albans.
Prerequisite(s): RBM1528 Human Physiology 2 or equivalent.

Content: This subject examines the mechanisms by which hormones exert their effects through metabolism, renal function, reproductive function and growth. This subject encompasses the basic principles involved in understanding the mechanisms of hormone action and specifically concentrates on the following areas. Mechanisms of hormone action: peptide hormones and steroids; hormonal control of metabolism; the importance of renal function in maintaining homeostasis; reproductive endocrinology; growth and development; hormonal and metabolic control of growth.


Class Contact: Two hours per week for one semester comprising 20 hours of lectures and 6 hours of practical work.

Assessment: Based on assignments, practical reports and an end-of-semester examination.

RBM3261 RISK MANAGEMENT
Campus: St Albans
Prerequisite(s): RBM2261 Public and Environmental Health (or equivalent).

Content: The terms of risk analysis are specifically defined to show that risk is a process of risk Assessment as well as risk management. For risk management the risk aversion and risk Assessment need to be qualified as being distinct from risk assessments that are more-quantified. With regard to risk management there are economic – to include the more valuable, beneficial, cost effective, activities; personal – try to avoid those activities which you did not prefer and; communal – what is done is consistent with what the community expects (risks in the case of risk management.

These definitions levels are examined in this subject.


Class Contact: Two hour lecture and one hour tutorial equivalents delivered online per week for one semester.

Assessment: Based on assignments, and tutorial topic questions.
will have gained experience in managing OHS through communication, attending committees, training and management and monitoring of these processes as well as workplace hazards and risks.

**Content**
This placement will allow students to undertake a structured work experience in risk management. Within their workplace(s) they need to show practical understanding of risk prevention strategies based on safety, science and management knowledge and skills, that are deployed at a higher management level than for the unit Workplace Management. Principles and best practice. Prentice Hall Financial Times

**Class Contact**
Attend for a minimum of 84 hours in a designated workplace(s).

**Assessment**
- P3, I, W1, A2, D3 Assessment will be based on applied understanding or OHSMS in the workplace(s).

---

**RBM3515 CLINICAL PHARMACOLOGY AND PATHOPHYSIOLOGY**

**Campus** St Albans

**Prerequisite(s)** RBM2570 Phytopharmaceutics

**Content**
Functional pathophysiology, commonly used pharmaceuticals, and pertinent medical terminology with particular emphasis on understanding the actions of specific pharmaceuticals and the identification of potentially life-threatening conditions.

**Required Reading**

**Recommended Reading**

**Class Contact**
The equivalent of six hours per week for one semester consisting of lectures, tutorials and clinical observation in appropriate health care settings.

**Assessment**
- One assignment, 25%; one examination, 50%; and one clinical report, 25%.

---

**RBM3550 GROWTH AND EARLY DEVELOPMENT**

**Campus** St Albans

**Prerequisite(s)** RBM2540 Pathophysiology 2 or equivalent.

**Content**
This subject builds on the work of first and second year Human Bioscience. The overall concept to be studied is the process of human development and aging and the physiological and pathological changes that occur throughout the life cycle. This subject presents the major regulating systems of the body and thus involves advanced study in the areas of neurological, hormonal and reproductive changes. Life stages from the embryo to senescence will be studied and environmental, societal, psychological and cultural influences will also be discussed. The subject allows exposure to a range of scientific techniques through the laboratory component and may include a minor project.

**Required Reading**
To be advised by lecturer.

**Class Contact**
Up to six hours per week maximum comprising two to three hours of lectures and up to three hours of workshop/laboratory/tutorial work per week.

**Assessment**
- Examination 50% and project/practical work 45%.
- Students are required to obtain a satisfactory grade in all components of the Assessment to obtain a pass grade.

---

**RBM3560 GROWTH, DEVELOPMENT AND AGING**

**Campus** St Albans

**Prerequisite(s)** RBM3550 Growth and Early Development or equivalent.

**Content**
This subject continues on the theme of human development and ageing and the physiological processes that occur, building on RBM3550 Growth and early Development. This includes the exploration of changes that occur throughout the life cycle and interaction with the environment. The subject allows exposure to a range of scientific skills and techniques through the laboratory/workshop component and includes a minor project.

**Required Reading**
To be advised by lecturer.

**Class Contact**
Up to six hours per week maximum comprising two to three hours of lectures and up to three hours of workshop/laboratory/tutorial work per week.

**Assessment**
- Examination 55% and laboratory work and project 45%.
- Students are required to obtain a satisfactory grade in all components of the Assessment to obtain a pass grade.

---

**RBM3590 ADVANCED EXPERIMENTAL TECHNIQUES**

**Campus** St Albans

**Prerequisite(s)**
All year two core units (RBM2800, RBM2260, RBM2530, RBM2540), RBM2590 Functional Histology and RBM2560 Medical Biochemistry.

**Content**
This subject introduces students to a variety of histological techniques and the role they play in medical research. There will be a particular emphasis on students receiving practical skills in a histology laboratory setting. Students will obtain skills in tissue sampling, preparation of fixed and frozen sections for light and electron microscopy, basic tissue staining, immunohistochemistry and in situ hybridization. Students will be introduced to light microscopy, confocal microscopy, transmission and scanning electron microscopy, morphology and morphometry.

**Required Reading**

**Class Contact**
Six hours per week for one semester comprising three hours of lectures and three hours of practicals.

**Assessment**
- Theory examination 55%, practical examination/assignment, 45%.

---

**RBM3610 BIOMEDICAL SCIENCE, ETHICS AND VALUES**

**Campus** St Albans

**Prerequisite(s)**
Successful completion of a full first year of tertiary study and appropriate subject(s) in human biology or psychology at second year tertiary level.

**Content**
Students will be introduced to ethical practice in animal and human research, incorporating the various policies and codes of practice for conducting research within Victoria University. This subject discusses, with examples, how scientists have investigated the functioning of the human body in health and disease: in-vitro experiments, forced or voluntary participation in experimentation, the use of animal models etc. The ethics of these practices are examined – how do we justify or choose the practices which elucidate the function of the human body? Who regulates the conduct of research? Can research into humans be objective and is objectivity a gendered concept? Issues arising from the practice of biomedical sciences will be examined, such as in-vitro fertilisation, the human genome project, genetic screening, competition and fraud, and toxicity testing. Reference may also be made to ethical practice in sociological and psychological research. The selected topics may vary as appropriate.

**Required Reading**

**Class Contact**
Four hours per week comprising two one hour lectures and one two hour tutorial/seminar session for one semester.

**Assessment**
- One essays, 30%; one VU animal or human ethics proposal 30%, one tutorial presentation/debate, 25%; tutorial attendance and participation, 15%.

---

**RBM3620 CHALLENGING THE SCIENTIFIC PARADIGM**

**Campus** St Albans

**Prerequisite(s)**
- RBF2922 Science and Society or an appropriate unit from the health sciences or complementary therapies.

**Content**
This subject examines how biomedical science in the twentieth century is under question. Alternative theories of the functioning of the human body will be explored – for example, from the complementary theories and from non-Western cultures. Critiques of complementary therapies from a biomedical sciences viewpoint and critiques of biomedical science from a complementary therapies.
viewpoint will be examined to address questions such as whether the two perspectives overlap and whether there can be a synthesis of biomedical science with aspects of complementary therapies. Environmental philosophy will be drawn upon to examine how humans perceive themselves in relation to the environment in general and other species in particular. Some human-centred versus eco-centric views will be explored.

**Required Reading** To be advised by lecturer.


**Class Contact** Four hours per week comprising two one-hour lectures and one two-hour tutorial/session for one semester.

**Assessment** Two essays, 60%; one tutorial presentation, 25%; tutorial attendance and participation, 15%.

---

**RBM3630 SCIENCE, MEDIA AND COMMUNICATION**

**Campus** St Albans

**Prerequisite(s)** ACC1047 Culture and Communication; ACC1043 Communications B or equivalent.

**Content** In this subject, students will be introduced to the forms by which information about biomedical sciences and health is communicated in the media. A critical understanding will be developed of the ways in which media information is used to persuade individuals about the value or otherwise of biomedical information to market products and influence behaviour will be examined with particular attention paid to the marketing of pharmaceutical products, medical practice, health education programs and complementary therapies. Students will examine materials such as newspapers, popular magazines concerned with health, health education material and examples of the scientific reports of public institutions concerned with the biomedical sciences.

**Required Reading** To be advised by lecturer.

**Class Contact** Four hours per week comprising two one-hour lectures and one two-hour seminar session for one semester.

**Assessment** Assignment, 40%; class presentation, 20%; media scrapbook and critical journal, 40%.

---

**RBM3640 ADVANCED NEUROSCIENCES**

**Campus** St Albans

**Prerequisite(s)** RBM2530 Pathophysiology.

**Content** This subject aims to provide insights into the most important current ideas in the study of neuroanatomy, neurophysiology and developmental neurobiology. This subject provides an advanced series of lectures in specialised areas of neuroscience research. The Content of the subject may vary with the expertise and research interests of the lecturing staff.

**Required Reading** Various scientific journals

**Class Contact** Four hours of lectures per week for one semester

**Assessment** Theory examination 55%, practical examination/assignment 45%

---

**RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT**

**Campus** St Albans

**Prerequisite(s)** RBM2540 Pathophysiology.

**Content** This subject provides an advanced series of lectures examining current research questions in the area of reproduction and development. Topics include: maternal recognition of pregnancy via foetal signalling and the resultant maternal response during the period of implantation; development of the embryonic neural crest, including epithelial-mesenchymal transformation, migration, and contribution to mature differentiated cell types; the role of steroid hormones in placental function; the role of autocrine and paracrine growth factors in the development of the foetal lung; the role of various extracellular matrix cytokines in the breakdown of the foetal membranes at birth. The Content of this subject may vary with the expertise and research interests of the lecturing staff.

**Required Reading** Various scientific journals

**Class Contact** Three hours of lectures per week for one semester

**Assessment** Theory examination 55%, practical examination/assignment 45%

---

**RBM3660 HUMAN DEVELOPMENTAL AND CLINICAL GENETICS**

**Campus** St Albans

**Prerequisite(s)** RBM 2540 Pathophysiology 2 and either RBM 2560 Medical Biochemistry or RBF2330 Cell Biology

**Content** The subject is designed to introduce students to developmental and clinical genetics with a specifically human focus. The major emphasis is on the importance of gene expression in normal development and variation, and the contribution of genetic abnormalities to disease.

**Topics may include**: The role of genes in development; differentiation and congenital malformation; human genetic principles such as assortment and segregation of genes, genetic variation and genetic defects, the importance of genetic heterogeneity, mendelian inheritance and gene frequencies in populations; Diagnosis and classification of genetic disorders; prenatal screening and diagnosis; disorders with genetic and environmental associations.

**Required Reading** Research and review articles as appropriate

**Class Contact** Three hours of lectures and three hours practical work for one semester

**Assessment** Theory examination 50%, practical reports/assignment 50%

---

**RBM3670 MOLECULAR PSYCHOLOGY**

**Campus** St Albans

**Prerequisite(s)** RBM 3550 Growth and early development or equivalent

**Content** This subject explores the relationships between Molecular Biology, Psychology, Anatomy and Genetics and Human Behaviour and Emotions. These relationships will be discussed in light of current research findings and current literature. The lecture series will explore the current zeitgeist of the medical and scientific community with respect to Molecular psychology, e.g. Topics may include explanation of brain anatomy and psychology and anti-social behaviour patterns. e.g. violent criminal behaviour.

**Required Reading** Research and review articles as appropriate

**Class Contact** Three hours of lectures 1 semester

**Assessment** Theory examination 50%, assignments 50%

---

**RBM3720 IMMUNOLOGY**

**Campus** St Albans

**Prerequisite(s)** RBM2360 Medical Microbiology 1 or RBM2530 and RBM2540 Pathophysiology 1 & 2

**Content** The aim of this subject is to provide students with an understanding of theoretical and practical bases of immunology. Subject topics include: active and passive immunity, components of the immune system, the immune response, immunological techniques and their application, molecular diagnostics including the use of monoclonal antibodies. The subject will be explored as a basic science with applications in the agriculture industry, food science, environmental science and medical science.


**Class Contact** Six hours per week comprising three hours of lectures and three hours of laboratory/tutorial work for one semester.

**Assessment** Assignments, 20%; practical work, 30%; final examination, 50%.

---

**RBM3800 PHARMACOLOGY**

**Campus** St Albans,

**Prerequisite(s)** RCS1100 Chemistry for Biological Sciences, RBM2560 Medical Biochemistry, RBM1518 and RBM1528 Human Physiology 1 and 2, or equivalent units.

**Content** The unit examines the pharmacodynamic processes of drug action, molecular pharmacology and specific drug therapies. Aspects relating to both medicinal chemistry, toxicity testing, clinical trials and requirements for the admission of new drugs are covered in topics that relate to new drug development. Pharmacokinetics, pharmacogenetics, sensitivity and resistance to drug therapies are further topics that address variation in drug outcomes. Social drug abuse and types of drug dependence are also discussed in this unit.

SCHOOL OF BIOMEDICAL SCIENCES

RBM3810 WELLNESS 1
Campus St Albans
Prerequisite(s) RBM2530 Pathophysiology 1 and RBM2540 Pathophysiology 2 or equivalent, or RBM2800 Cardiorespiratory and Renal Physiology plus other relevant second year units at the discretion of the co-ordinator.

Content Module A: This unit introduces the concepts of mind, body and spirit. These areas are explored from psychological, physiological, philosophical and sociological perspectives. Current literature will be used to introduce the areas of psychophysiology and psychoneuroimmunology and their connections to the mind/body/spirit paradigm. The ethics of human research and evaluation will be discussed throughout the series of lectures. In addition, students will be introduced to basic methods of information gathering with respect to the mind-body-spirit paradigm including the evaluation of its status in individuals. For example, aspects of psychophysiology and psychoneuroimmunology such as stress and disease, sexuality and the impact of environment on the health of the mind, body and spirit are examined. Current research literature in the area will be analysed.

Module B: Students will be introduced to fundamental concepts of health and wellness. The difference between professional/scientific concepts and lay concepts will be explored. Wellness promotion will be presented primarily in the context of established public health approaches utilised in health education, promotion and prevention including medical, behavioural, educational, social and empowerment strategies. Some of the dilemmas and pitfalls in health promotion will be canvassed. Students will also be introduced to basic concepts of occupational health and workplace health promotion. Risk assessment, material safety, manual handling and relevant legislation will be discussed. Context will be provided by guest speakers from relevant organisations.

Required Reading

Recommended Reading

Class Contact
Module A: Three hours per week for one semester, comprising two hours of lectures and one hour of tutorial. Module B: Three hours per week for one semester comprising one and a half hours of lectures and one and a half hours tutorial/seminar.

Assessment Assignment/tutorial work, 25%; examination, 25% for each of Module A and B.

RBM3850 NUTRITIONAL THERAPEUTICS C
Campus St Albans
Prerequisite(s) RBM2850 and RBM2855 Nutritional Therapeutics A and B. RBM2540 Pathophysiology 2

Content Diet, novel and common food supplementation support for the following – neurodegenerative disease, neurological dysfunction, behavioural disorders, life threatening illnesses; laboratory testing for system dysfunction; formulation and costing of supplementation programs to meet patient needs; regulation and boundaries when working with practitioners who treat patients with life threatening illnesses; Analysis of patient follow-up and reformulation of treatment protocols where required.


Class Contact Four hours per week for one semester comprising two hours lecture, two hours tutorial/workshop.

Assessment Examination (3 hours), 50%; case history, 50%.

RBM3855 NUTRITIONAL THERAPEUTICS D
Campus St Albans
Prerequisite(s) Completion of 2nd year; RBM 3850 Nutritional Therapeutics C. RBM2540 Pathophysiology 2

Content Diet, novel and common food supplementation support, laboratory testing for system dysfunction, formulation and costing of supplementation programs to meet patient needs: Analysis of patient follow-up and reformulation of treatment protocols.


Class Contact Four hours per week for one semester comprising two hours lecture, two hours tutorial/workshop.

Assessment Examination (3 hours), 50%; case history, 50%.

RBM3910 PROJECT
Campus Footscray Park, St Albans, Werribee
Prerequisite(s) Successful completion of the second year of the Biomedical Sciences degree

Content Third year student projects provide students with an opportunity to select and undertake either (a) a brief research project in an area of interest with members of the Biomedical Sciences staff, or (b) a work-based placement in the industry he/she intends to enter.
Both the research and work-based placements enable the student to undertake a structured work experience program as an integral part of their degree course. Gaining practical experience in their chosen field enables students to test interest and ability in these areas. Selection The number of Project places will be limited by the number of available projects. Places will be allocated on the basis of academic merit. It would be expected that students wishing to do Project would have a Credit average and be in their final semester of the course. Required Reading Selected material as advised by the project supervisor

Class Contact Six hours per week for one semester comprising laboratory work or work-based placement

Assessment Project Presentation and Report 100%

**RBM3921 WESTERN MEDICAL DIAGNOSIS AND INTERVENTIONS 1**

**Campus St Albans**

**Prerequisite(s)** RBM2912 Pathophysiology 2; or equivalent

**Student Learning Outcomes**: On successful completion of this unit, it is expected that students will be able to:

1. Describe basic pharmacology and toxicology terms in plain English;
2. Explain the nomenclature, classifications, formulations and routes of administration of western pharmaceuticals;
3. Explain mechanisms of actions, indications, contraindications, adverse reactions of the major classes of drugs as outlined in western pharmacopoeia;
4. Describe the absorption, distribution and excretion of and detoxification for common prescription, over-the-counter and recreational drugs, including xenobiotics and plant contaminants where relevant;
5. Explain the factors that influence the dose-response relationship;
6. Explain the dose-response relationship in terms of effectiveness of treatment;
7. Outline and predict the main types of drug-herb-nutrient interactions;
8. Explain the types and mechanisms of adverse reactions to drugs and outline the management of drug-related adverse outcomes and other emergencies;
9. Explain the appropriate use of antidotes;
10. Explain the drugs and poisoning schedule as it applies in Australia;
11. State the reporting procedures for adverse drug and drug/herb outcomes;
12. Identify pharmacological conditions warranting referral to other health professionals;
13. Use reference materials and information services to obtain information on drugs;
14. Demonstrate the development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content** Introduction to the basic and clinical concepts in pharmacology and toxicology. Routes of administration. Pharmacokinetics: absorption, distribution, metabolism and excretion of drugs. Pharmacodynamics: receptors, mechanisms of action, dose-response effects. Indications, and contraindications for safe use of drugs. Adverse and toxic reactions of the major classes of drugs. Resistance and tolerance. Drug/herb/nutrient interactions; plant contaminants. Australian drugs and poisoning schedules and reporting mechanisms. Pharmacotherapeutics: analgesics, opioids, NSAIDs, cardiovascular-renal and lipid lowering drugs, psychoactives and other nervous system agents, hormone replacement and endocrine drugs, paediatric, recreational and over-the-counter drugs. Western prescription writing, patient compliance and polypharmacy. A Western medical emphasis will be given to the treatment of conditions presented in the CM and western clinical specialties, including management of drug-related disorders and drug-related emergencies and appropriate use of available antidotes.


**Class Contact** Hours six hours per week or equivalent for one semester comprising lectures, tutorials and practicals. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated Class Contact hours.

**Assessment** Participation in practical sessions with at least 80% attendance unless well-documented acceptable reasons are provided (hurdle requirement); two assignments (1500 words each) (20% each); one 2-hour examination (60%). This unit is a hurdle requirement. Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated Class Contact hours. Practical sessions have a hurdle requirement of at least 80% attendance.

**RBM3922 WESTERN MEDICAL DIAGNOSES AND INTERVENTIONS 2**

**Campus St Albans**

**Prerequisite(s)** RBM3921 Western Medical Diagnoses and Interventions 1; or equivalent

**Student Learning Outcomes**: On successful completion of this unit, it is expected that students will be able to:

1. Explain the principles of western medical history taking and western physical examination techniques; 2. Discuss key social, cultural and demographic factors that impact in health care, and outline the factors, including interpersonal, that need to be considered in the clinical interview; 3. Conduct interviews sufficient to record western medical case notes in a legal (legible, accurate, orderly) manner; 4. Accurately record medical histories as western medical case notes, using accepted abbreviations and format, e.g., POMR; 5. Explain the processes and issues involved in specific physical examinations; 6. Conduct examination procedures in a way to minimize patient distress, embarrassment and risk of injury; 7. Demonstrate skilful use of standard western diagnostic instruments, e.g., stethoscope, sphygmomanometer, otoscope, and palpate organs to proficiency standards acceptable in CM clinics; 8. Outline best practice western communications strategies that mentally prepare patients for clinical laboratory tests and minor medical procedures; 9. List common and routine diagnostic and screening tests conducted in haematology, serology, biochemistry, microbiology and pathology laboratories, and explain the indications and any contraindications of these clinical laboratory tests; 10. Distinguish amongst ‘reference’, ‘normal’, ‘clinical’ and ‘abnormal’ values for clinical laboratory reports; 11. Explain the principles of interpreting clinical laboratory results and interpreting the reliability (accuracy, precision, specificity, sensitivity) of clinical laboratory tests; 12. Define terminology commonly used in radiology and x-ray reports, and explain the clinical significance of those terms; 13. Explain the clinical indications for requesting specialized clinical laboratory tests and radiographic procedures such as contrast, Doppler, tomographic and labelling techniques; 14. Apply the basic principles of radiographic interpretation to diagnostic images of normal and pathological anatomy; 15. Use appropriate terminology when referring to findings on radiographic and other imaging procedures; 16. Identify conditions warranting referral to other health professionals; 17. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content** Development of material covered in pathophysiology, with particular emphasis on the identification of potentially life-threatening acute and chronic conditions that warrant referral. Knowledge of the main clinical laboratory tests and western medical treatment techniques; indications, contra-indications and complications of diagnostic and screening procedures; interpretation of clinical results and reliability of clinical tests. The use of the stethoscope, sphygmomanometer, otoscope, ECG, organ palpation and knowledge of other investigative procedures including contemporary imaging and...
laboratory procedures employed by health care professionals. A
standardized systems approach to western medical history taking and
case note recording and interpreting, with emphasis on conditions
presenting in the HM clinical specialties. Social, cultural and
interpersonal factors that impact on the clinical interview and physical
examination, and best practice western communications strategies that
mentally prepare patients for clinical laboratory tests and minor medical
procedures.

Required Reading
guide to clinical laboratory medicine and diagnostic imaging; St Louis,

Recommended Reading
Bickley, L. S. (2004). Bates’ guide to physical examination and
history taking (8th ed.). Lippincott, Williams and
French's index of differential diagnosis (13th ed.). Boston: Butterworth-
psychology. Biopsychosocial interactions. An Australian perspective.
Delmar's guide to diagnostic and laboratory tests. Canada: Thompson
Edinburgh: Churchill Livingstone. Kumar, V., Abbas, A. K., & Fausto, N.
(2004). Robbins and Cotran's pathological basis of disease (7th ed.).
Elsevier Science. Longmore, J., Wilkinson, I., & Rajagopalan, S.

Contact Hours
Six hours per week or equivalent for one semester
comprising lectures, tutorials and practicals. Students should
reasonably expect to devote additional private contact hours of at least
three times more than the stipulated Class Contact hours.

Assessment
Participation in practical sessions with at least 80%
attendance unless well-documented acceptable reasons are provided
(hurdle requirement); two assignments (1500 words each) (20% each);
one 2-hour examination (60%). This unit is a hurdle requirement.

Required Reading
Medicine, Churchill Livingstone. Toohley, L., Krettle, M.S., 1999,
Nutritional Physiology: Clinical Applications and Scientific Research,
Heathquest Publishing. Werbach, M.R., 1996, Nutritional Influences on
Illness, 2nd edn, Third Line Press.

Recommended Reading
Gropper, S.S., Smith, J.L, Groff, J.L., 2006,
Advanced Nutrition and Human Metabolism, 4th edn, Wadsworth.

Assessment
Examination (3 hours), 50%; class history, 50%.

RBM3960 NUTRITIONAL FRONTIERS
Campus St Albans
Prerequisite(s) Nil
Content Advances in nutrition research in selected topics, including,
cardiovascular, cancer, infectious disease, mental, reproductive and
public health, nutrigenomics. Evidence for and against the
effectiveness of various therapies and non invasive solutions;
comparision of qualitative and quantitative paradigms; role of audit in
monitoring and evaluation of clinical work; social science research
methods.

Required Reading
Current nutrition scientific journals. Lewith, G.,
Jonas, W.B., & Walach, H., 2002, Clinical Research in Complementary
Therapies: Principles, Problems and Solutions, Edinburgh, Churchill
Livingstone.

Recommended Reading
Armsrong, D. & Grace, J., 1994, Research
Methods and Audit in General Practice, 2nd edn, Oxford, Oxford
Publications.

Class Contact
four hours per week for one semester comprising two
hours lecture, two hours tutorial/seminar.

Assessment
Two essays, 2500 words each, 50%; examination (3
hours), 50%.

RBM3970 OPERATING A CLINICAL PRACTICE
Campus St Albans
Prerequisite(s) Nil
Content Factors in establishing and operating a clinical practice; legal,
professional and insurance issues, including personal and professional
indemnity and OHS regulations; business banking and accountancy,
including taxation laws and essential business record keeping and
reporting requirements; basic marketing techniques; codes of ethics
and practice; using media in practice; to find appropriate employment.

Required Reading
Jones, G., 1999, How to Start Business from

Recommended Reading
Harland, N. and Sinn, G., 1995, Healthy
Business; The Natural Practitioners Guide to Success, 4th edn, Hyden

Class Contact
four hours per week for one semester comprising two
hours lecture, two hours workshop.

Assessment
Examination (3 hours), 40%; assignment 2500 words
each, 40%; written application and interview, 20%.

RBM4001 SCIENCE HONOURS 1
Campus St Albans, Footscray Park.
Prerequisite(s) Satisfactory completion of an undergraduate degree program with a credit average (65%) in the final year; or at the
discretion of the Course Co-ordinator.

Content
The Honours program consists of a research project and
coursework. The research project will be undertaken in one of the
research areas of the School of Biomedical Sciences and may, subject
to approval, be undertaken at an external location. The coursework
components cover a range of information including advanced areas of
medical research, literature analysis and critical appraisal, ethics in
research, scientific writing, oral presentation, methodological
techniques, experimental design, statistics, data analysis, computer
applications and software data presentation. The literature review will
provide the scientific background and rationale for the research project,
while the experimental design will provide the methodology to be
applied in the research project.

Required Reading
To be advised by the supervisor and searched by
student as part of research training

Class Contact
No formal contact hours, although a normal fulltime
load is considered a minimum of 20 hours per week. Regular meetings
with the supervisor are record-
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**Assessment**
The nature of the coursework Assessment will vary and may be based on written assignments, seminar presentations and a written statistics or experimental design examination. The research project Assessment will consist of a written literature review, an oral presentation and submission of an experimental design.

**RBM4002 SCIENCE HONOURS 2**
Campus St Albans, Footscray Park.

**Prerequisite(s)** Satisfactory completion of an undergraduate degree program with a credit average (85%) in the final year; or at the discretion of the Course Co-ordinator.

**Content** The Honours program consists of a research project and coursework. The research project will be undertaken in one of the research areas of the School of Biomedical Sciences and may, subject to approval, be undertaken at an external location. Students will conduct a research project under supervision. The project will comprise a novel scientific investigation in an area of expertise of the project supervisor. The results of the project will be reported in an oral presentation and a written thesis, which will include an introduction, a description of methodology, results, a discussion of the results (including a critical appraisal of the results) and recommendations for further research in the area.

**Required Reading** To be advised by the supervisor and searched by student as part of research training

**Class Contact** No formal contact hours, although a normal fulltime load is considered a minimum of 20 hours per week. Regular meetings with the supervisor are recommended.

**Assessment** The research project will be assessed on the oral presentation and the quality of the research and its presentation in the written thesis as well as the ability to answer questions regarding the research work undertaken.

**RBM4923 WESTERN MEDICAL DIAGNOSES AND INTERVENTIONS 3**
Campus St Albans

**Prerequisite(s)** RBM3922 Western Medical Diagnoses and Interventions 2; or equivalent

**Student Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Evaluate differences amongst western and Chinese medical approaches to acute and chronic health problems;
2. Distinguish amongst western and Chinese medical treatment and management regimes in terms of the diagnosis of gastrointestinal, renal, integumental, musculoskeletal, immunological and skin conditions;
3. Explain within a contemporary western medical framework, the presentation, investigations, diagnosis, aetiology, treatment options and management of patients with common acute and chronic conditions as well as presenting at western medical gastroenterology, urology, rheumatology, dermatology and orthopaedics clinics;
4. Explain within a contemporary western medical framework, differential diagnoses of various symptom presentations and investigative findings for patients presenting with gastrointestinal, renal, urogenital, musculoskeletal, immunological and skin conditions;
5. Demonstrate skilful use of relevant diagnostic equipment, including the use of the stethoscope, sphygmomanometer, otoscope, and organ palpation and other region-specific procedures;
6. Explain the features and applications of typical invasive and non-invasive western medicine techniques, such as EKG, echocardiography, angiography, lung function, CT scan, MRI, reflux tests, barium meal, barium enema, endoscopy, colonoscopy, laparoscopy, liver function tests, biopsy, radio-active implants, radio-tracing;
7. Explain, in plain English and in professional language, the need for routine and advanced clinical laboratory, imaging and other diagnostic procedures of and, complex diagnostic procedures on the gastrointestinal, renal, urogenital, musculoskeletal, immunological and integumentary systems;
8. Discriminate amongst conditions warranting routine and urgent referral to medical practitioners and other health professionals;
9. Communicate orally and in writing, in plain English and in professional language, the need for a patient referral to any of the western medical specialist clinics in gastroenterology, urology, rheumatology and orthopaedics;
10. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content** Development of material covered in pathophysiology with particular emphasis on the identification of potentially life-threatening acute and chronic conditions presenting in western medical gastroenterology, urology, rheumatology, dermatology and orthopaedics. An understanding of advanced clinical laboratory, imaging and functional tests and complex diagnostic techniques; reinforcement of skills in using the stethoscope, sphygmomanometer, otoscope, organ palpation and other procedures used by health care professionals. A multi-systems approach is used to present a western medical emphasis on conditions presented in the CM clinical specialities.

**Required Reading** Students should have access to a copy of the most recent MIMS or the Australian medicines handbook available from Australian Medicines Handbook Web site, http://www.amh.org.au


**Recommended Reading**


**Class Contact** Hours The equivalent of 72 hours for one semester comprising lectures, tutorials and practicals. Practical sessions have a hurdle requirement of at least 80% attendance.

**Assessment** Participation in practical sessions with at least 80% attendance unless well-documented acceptable reasons are provided (hurdle requirement); two assignments (2500 words each) (20% each); one 3-hour examination (60%). This unit is a hurdle requirement.

**Additional Statements:** Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated Class Contact hours. Practical sessions and workshops have a hurdle requirement of at least 80% attendance. This unit may be delivered in its entirety in burst mode to allow students the opportunity to undertake their VU-approved final clinical internship.

**RBM4924 WESTERN MEDICAL DIAGNOSES AND INTERVENTIONS 4**
Campus St Albans

**Prerequisite(s)** RBM3923 Western Medical Diagnoses and Interventions 3, Or Equivalent.

**Content** Development of material covered in pathophysiology with particular emphasis on the identification of potentially life-threatening acute and chronic conditions. An understanding of advanced pathology tests and complex diagnostic techniques; reinforcement of skills in using the stethoscope, sphygmomanometer, otoscope, organ palpation and other procedures used by health care professionals. Conditions discussed in the CM clinical specialties are presented using a western medicine systems approach. Contemporary medical and psychiatric conditions are included.


**Recommended Reading**


80
### RBM5510 NEURO AND NEUROMUSCULAR DIS FOR EXE REHAB

**Campus** Footscray Park

**Prerequisites** HPG5041 Functional Anatomy or equivalent HPG5042
Musculoskeletal Physiology for Rehabilitation or equivalent

**Content** The subject Content will include (i) mechanisms of injury and repair in neurological and neuromuscular tissue; (ii) spinal cord and peripheral nerve injuries; (iii) acquired brain injury; (iv) stroke (cerebrovascular accident or ischaemic and haemorrhagic); (v) multiple sclerosis; (vi) Parkinson's disease; (vii) muscular dystrophy; (viii) mitochondrial myopathies; (ix) cerebral palsy; (x) ageing; (xi) detrimental effects of long term inactivity and bed rest.


**Subject Hours** Two hours of lectures per week for one semester.

**Assessment** Written assignment (40%); case studies x2 (30% each).
Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

**RCS3411 ENVIRONMENTAL LEGISLATION**
Campus St Albans
Prerequisite(s) Nil.
Required Reading To be advised by lecturer.
Class Contact Four hours of lectures per week for one semester.
Assessment Fieldwork and assignments, 40%; examinations, 60%.

**RCS5172 SOLID WASTE MANAGEMENT**
Campus Footscray Park
Prerequisite(s) Nil.
Content Nature and sources of solid wastes; hazardous waste handling; incineration; landfills; other disposal alternatives; monitoring and control.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester.
Assessment Assignment and site visit reports, 40%; examination, 60%.
**SCHOOL OF COMPUTER SCIENCE AND MATHEMATICS**

Below are details of courses offered by the School of Computer Science and Mathematics in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses.

**NOTE:** Courses available to international students are marked with the (I) symbol.

### BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND AVIATION (I)

**Course Code:** SBCA

**Course Objectives**
The Bachelor of Science in Computer Science and Aviation aims to provide participants with:
- a practical and applied approach to the concepts of computer science and aviation;
- a range of skills in computer science, the mathematical sciences and aeronautical theory subjects at a level sufficient to satisfy the requirements for the issue of a Commercial Pilot's Licence (CPL), and Instrument Rating.

The specific aims of the course are to provide students with the opportunity to:
- obtain level two accreditation from the Australian Computer Society (ACS) by passing all compulsory computer science subjects, and thus gaining professional recognition;
- develop skills and competence in aviation theory. The course is structured so that students can integrate practical flying training along with their academic studies and if choosing to do so and following the guidelines given, will complete the degree at the same time as qualifying for the issue of a Commercial Pilot's Licence (CPL) and Command Instrument Rating.

**Course Duration**
The course is offered over three years full-time and part-time equivalent.

**Admission Requirements**
To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods, or have the equivalent of these qualifications. Completing Specialist Mathematics leads to an ENTER score 3 points higher.

Alternatively, entry is via TAFE articulation or under mature age provisions. In addition, students must pass the prescribed medical examination conducted by a Civil Aviation Safety Authority-Approved Aviation Medical Examiner in order to be permitted to commence flying training.

Applicants may be interviewed. Consideration by a Faculty panel may be given to relevant work experience, and any other activities undertaken demonstrating ability to achieve in this course.

Applicants entering with a Private Pilot's License or higher will be given full credit for completed aviation subjects and can join the course with demonstrating ability to achieve the admission requirements. The course provides existing pilots the opportunity to upgrade their non-flying skills as well as providing them with a degree qualification which is likely to be necessary if they are to further their career in the aviation industry.

**Course Structure**

<table>
<thead>
<tr>
<th>Year</th>
<th>Course Code</th>
<th>Course Description</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RCA1010</td>
<td>INTRODUCTORY AVIATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1115</td>
<td>COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1311</td>
<td>PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1711</td>
<td>MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1114</td>
<td>INTRODUCTION TO COMPUTING AND THE INTERNET</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1312</td>
<td>PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA1020</td>
<td>BASIC AERONAUTICAL KNOWLEDGE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Year</td>
<td>RCA2020</td>
<td>METEOROLOGY AND HUMAN FACTORS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2030</td>
<td>NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Year</td>
<td>RCA2040</td>
<td>AERODYNAMICS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2050</td>
<td>AIRCRAFT GENERAL KNOWLEDGE FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2060</td>
<td>OPERATIONS PERFORMANCE AND FLIGHT PLANNING FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1713</td>
<td>DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Year</td>
<td>RCA1010</td>
<td>INTRODUCTORY AVIATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1115</td>
<td>COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1311</td>
<td>PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1711</td>
<td>MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1114</td>
<td>INTRODUCTION TO COMPUTING AND THE INTERNET</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1312</td>
<td>PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA1020</td>
<td>BASIC AERONAUTICAL KNOWLEDGE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2020</td>
<td>METEOROLOGY AND HUMAN FACTORS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2030</td>
<td>NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2040</td>
<td>AERODYNAMICS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2050</td>
<td>AIRCRAFT GENERAL KNOWLEDGE FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2060</td>
<td>OPERATIONS PERFORMANCE AND FLIGHT PLANNING FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2070</td>
<td>PERFORMANCE AND LOADING FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1311</td>
<td>PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1713</td>
<td>DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA1020</td>
<td>BASIC AERONAUTICAL KNOWLEDGE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2020</td>
<td>METEOROLOGY AND HUMAN FACTORS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2030</td>
<td>NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA1010</td>
<td>INTRODUCTORY AVIATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM1115</td>
<td>COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Year</td>
<td>RCA2020</td>
<td>METEOROLOGY AND HUMAN FACTORS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA2030</td>
<td>NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>RCA1020</td>
<td>BASIC AERONAUTICAL KNOWLEDGE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Other Course Specific Notes: To qualify for the award of Bachelor of Science in Computer Science and Aviation, a total of 288 credit points are needed. No stage completions exist for this course.

**Assessment**
The assessment for each subject is detailed in the subject listing.
BACHELOR OF SCIENCE IN COMPUTATIONAL FINANCIAL MATHEMATICS

Course Code: SBCF

Course Objectives
A great many businesses in the unpredictable world of commerce employ sophisticated and computationally intensive mathematical tools to help corporations determine strategies for market trading and risk profiling. As a result, virtually all major banking, investment and energy companies employ graduates with expertise in mathematics and/or computing.

This course is designed to address this demand by coupling a program in computing and mathematical sciences with a focus on finance and risk management. There is no other undergraduate course in the country, and indeed very few internationally, that seeks to combine Finance with both the disciplines of Computer Science and the Mathematical Sciences in this way.

Course Duration
The course is offered over three years full-time and part-time equivalent.

Admission Requirements
To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods or have the equivalent of these qualifications.

Alternatively, entry is via TAFE articulation or under mature age provisions.

Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>Full Fee</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAO1101 ACCOUNTING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

or

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

*For those doing ACE1145 in Semester One, RCM1614 to be taken over summer semester.

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One elective from list A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2611 LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One elective from list A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RCM3413 FINANCIAL MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One elective from list B or list C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3002 PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3711 COMPUTATIONAL METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One elective from list B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One elective from list C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

List A

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2315 ADVANCED PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2614 STATISTICAL DATAMINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3112 USER INTERFACE DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3311 OBJECT ORIENTED PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

List B

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3316 ADVANCED MATHEMATICAL TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3613 TIME SERIES ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3615 MULTIVARIATE STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3911 SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

List C

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAO3307 CORPORATE FINANCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>BAO3403 INVESTMENT AND PORTFOLIO MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3940 COMPUTATIONAL RISK MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Other Course Specific Notes
To qualify for the award of Bachelor of Science in Computational Financial Mathematics, a total of 288 credit points are needed. No stage completions exist for this course.
BACHELOR OF SCIENCE IN COMPUTER AND MATHEMATICAL SCIENCES (I)

Course Code: SBCM

Course Objectives
The aim of the program is to provide graduates with the analytical ability, factual knowledge and communication skills that will suit them for employment in business and industry in one or more of the following areas:

- computing: programming, software development, systems design and analysis, applications development, technical support.
- statistics: data analysis, quality improvement, market research, forecasting, econometrics.
- operations research: production planning and scheduling, simulation studies, transportation planning, resource allocation.
- financial modelling: investment analysis, project evaluation.
- secondary teaching: mathematics, computer science.

One of the most significant features of the courses is the attempt to involve students in the solution of real world problems. Naturally, problem-solving is a large component of all the subjects taught in the course but, starting in the first year, special emphasis is placed on problem formulation and report writing.

All students undertake at least one industry project in the third year of the course. These projects tend to be related to problems encountered in specific areas of the manufacturing industry, banking or finance, government statutory authorities, or services such as hospitals and local councils.

As evidenced by the high rate of job placement in the areas listed above, graduates have been well-received in industry, commerce and government.

Admission Requirements
To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods, or have the equivalent of these qualifications. Completing Specialist Mathematics leads to an ENTER score 3 points higher.

Alternatively, entry is via TAFE articulation or under mature age provisions.

Course Duration
The courses are offered on a full-time basis over three years. Summer evening subjects are also offered to assist students to complete their studies.

Course Structure

<table>
<thead>
<tr>
<th>Computer and Mathematical Sciences</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>(if needed) – this replaces RCM1613 in Semester One</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>(for those that did ACE1145 in Semester One and this replaces the 1st year elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2611 LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One elective from list B below</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One elective from lists A, B, C or D below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One elective from list B below</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two electives from list A, B, C, or D below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One elective from list D below</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One elective from list C or D below</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3002 PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Two electives from lists C or D below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One elective from list D below</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>List A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2112 OPERATING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2113 MULTIMEDIA SYSTEMS DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2213 COMPUTER GRAPHICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2315 ADVANCED PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM29303D WEB TECHNOLOGIES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
## Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee (AUS) (AUS) (AUS) (AUS)

### List B

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM2321</td>
<td>MATHEMATICS OF CONTINUOUS PROCESSES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2511</td>
<td>IMAGE PROCESSING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2612</td>
<td>FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2614</td>
<td>STATISTICAL DATA MINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2712</td>
<td>MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2911</td>
<td>LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2912</td>
<td>PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### List C

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM3111</td>
<td>DATA COMMUNICATIONS &amp; NETWORKS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3112</td>
<td>USER INTERFACE DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3115</td>
<td>ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3211</td>
<td>DATABASE SYSTEMS 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3311</td>
<td>OBJECT ORIENTED PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3312</td>
<td>INTELLIGENT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3313</td>
<td>SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3314</td>
<td>OBJECT ORIENTED ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3820</td>
<td>INTERNET COMPUTING USING XML</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3950</td>
<td>INTERNET DATA MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3960</td>
<td>INTERNET SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3970</td>
<td>COMPUTER GRAPHICS FOR GAME PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### List D

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM3316</td>
<td>ADVANCED MATHEMATICAL TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3413</td>
<td>FINANCIAL MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3511</td>
<td>IMAGE PROCESSING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3611</td>
<td>REGRESSION ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3613</td>
<td>TIME SERIES ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3615</td>
<td>MULTIVARIATE STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3617</td>
<td>QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3711</td>
<td>COMPUTATIONAL METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3720</td>
<td>CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3911</td>
<td>SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3940</td>
<td>COMPUTATIONAL RISK MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

**Other Course Specific Notes**

To qualify for the award of Bachelor of Science in Computer and Mathematical Science, a total of 288 credit points are needed. No stage completions exist for this course.

**Assessment**

Assessment for each subject is detailed in the subject listings.

### BACHELOR OF SCIENCE IN COMPUTER SCIENCE (I)

**Course Code:** SBCO

**Course Objectives**

The program aims to provide graduates with the analytical ability, factual knowledge and communication skills that will suit them for employment in business and industry in one or more of the following areas:

- Computing: programming, software development, systems design and analysis, applications development, technical support.
- Statistics: data analysis, quality improvement, market research, forecasting, econometrics.
- Operations research: production planning and scheduling, simulation studies, transportation planning, resource allocation.
- Financial modelling: investment analysis, project evaluation.
- Secondary teaching: mathematics, computer science.

One of the most significant features of the courses is the attempt to involve students in the solution of real world problems. Naturally, problem-solving is a large component of all the subjects taught in the course but, starting in the first year, special emphasis is placed on problem formulation and report writing.

All students undertake at least one industry project in the third year of the course. These projects tend to be related to problems encountered in specific areas of the manufacturing industry, banking or finance, government statutory authorities, or services such as hospitals and local councils. As evidenced by the high rate of job placement in the areas listed above, graduates have been well-received in industry, commerce and government.

**Admission Requirements**

To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods, or have the equivalent of these qualifications. Completing Specialist Mathematics leads to an ENTER score 3 points higher.

Alternatively, entry is via TAFE articulation or under mature age provisions.

**Course Duration**

The courses are offered on a full-time basis over three years. Summer evening subjects are also offered to assist students to complete their studies.

### Course Structure

**Computer Science**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
</tr>
<tr>
<td></td>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
</tr>
<tr>
<td></td>
<td>RCM1311 PROGRAMMING 1</td>
</tr>
<tr>
<td></td>
<td>RCM1613 APPLIED STATISTICS 1</td>
</tr>
<tr>
<td></td>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
</tr>
<tr>
<td>Semester</td>
<td>Course Code</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Semester 2</td>
<td>RCM1614</td>
</tr>
<tr>
<td>or</td>
<td>RCM1114</td>
</tr>
<tr>
<td>or</td>
<td>RCM1211</td>
</tr>
<tr>
<td>or</td>
<td>RCM1312</td>
</tr>
<tr>
<td>or</td>
<td>RCM1613</td>
</tr>
<tr>
<td>or</td>
<td>RCM1713</td>
</tr>
</tbody>
</table>

Students may complete RCM1114 or RCM1614 in Semester 2. Students who completed ACE1145 in Semester 1 may do RCM1613 in Semester 2.

Year 2

| Semester 1 | RCM2312 | SOFTWARE ENGINEERING 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| Two electives from lists A, B or C below under SBIA (each worth 12 credit points) 36 credit points |

Semester 2

| Three electives from lists A, B or C below under SBIA (each worth 12 credit points) 48 credit points |

Year 3

| Semester 1 | ACE3145 | CSM PROFESSIONAL COMMUNICATION | 12 | 0.1250 | 1 | $510 | $637 | $1,430 |
| or | RCM3001 | PROJECT 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| Two subjects from lists A, B or C below (each worth 12 credit points) 24 credit points |

Semester 2

| RCM3002 | PROJECT 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| Three electives from lists A, B or C under SBIA (each worth 12 credit points) 36 credit points |

List A

| RCM2111 | DATA COMMUNICATIONS AND NETWORKS 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2112 | OPERATING SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2113 | MULTIMEDIA SYSTEMS DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2213 | COMPUTER GRAPHICS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2218 | DATABASE SYSTEMS 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2311 | OBJECT ORIENTED PROGRAMMING 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2313 | SOFTWARE DEVELOPMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2315 | ADVANCED PROGRAMMING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2316 | NETWORK OPERATING SYSTEM ADMINISTRATION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2810 | ADVANCED INTERNET PROGRAMMING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2930 | 3D WEB TECHNOLOGIES | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

List B

| RCM3111 | DATA COMMUNICATIONS & NETWORKS 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3112 | USER INTERFACE DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3115 | ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3211 | DATABASE SYSTEMS 3 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3311 | OBJECT ORIENTED PROGRAMMING 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3312 | INTELLIGENT SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3313 | SOFTWARE ENGINEERING 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3314 | OBJECT ORIENTED ANALYSIS AND DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3820 | INTERNET COMPUTING USING XML | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3950 | INTERNET DATA MANAGEMENT | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3960 | INTERNET SECURITY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3970 | COMPUTER GRAPHICS FOR GAME PROGRAMMING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

List C

| RCM1712 | MATHEMATICAL FOUNDATIONS 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2321 | MATHEMATICS OF CONTINUOUS PROCESSES B | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2511 | IMAGE PROCESSING 1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2811 | LINEAR STATISTICAL MODELS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2612 | FORECASTING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2614 | STATISTICAL DATA MINING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2712 | MATHEMATICS OF CONTINUOUS PROCESSES A | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2713 | MODELLING FOR DECISION MAKING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2911 | LINEAR OPTIMISATION MODELLING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2912 | PROJECT SCHEDULING | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM2915 | STOCHASTIC AND COMBINATORIAL OPTIMISATION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3511 | IMAGE PROCESSING 2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3611 | REGRESSION ANALYSIS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3613 | TIME SERIES ANALYSIS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3615 | MULTIVARIATE STATISTICS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3617 | QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3711 | COMPUTATIONAL METHODS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3720 | CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
| RCM3911 | SIMULATION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

Other Course Specific Notes
To qualify for the award of Bachelor of Science in Computer Science, a total of 288 credit points are needed. No stage completions exist for this course. Additionally, students must complete a minimum of 3 subjects from List A and 5 subjects from List B.
BACHELOR OF SCIENCE IN INTERNET TECHNOLOGIES AND APPLICATIONS (I)

Course Code: SBIA

Course Objectives
Internet and web-based computing has in recent years assumed a huge importance in industry, for theoretical and applied computer science, and research. This course has been established to provide students with the fundamental background for the development and maintenance of Internet and web-based services. A new Internet Technologies and Applications Research Lab has been established recently to support academic and research activities in the areas.

Course Duration
The course is offered over three years full-time and part-time equivalent.

Admission Requirements
To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods or have the equivalent of these qualifications. Alternatively, entry is via TAFE articulation or under mature age provisions.

Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AU$)</td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>or</td>
<td>RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1713 DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>(for those that did ACE1145 in Semester One and this replaces the 1st year elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2112 OPERATING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3820 INTERNET COMPUTING USING XML</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3002 PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3900 INTERNET SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3950 INTERNET DATA MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2113 MULTIMEDIA SYSTEMS DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2213 COMPUTER GRAPHICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2315 ADVANCED PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2903 D Web TECHNOLOGIES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>List B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3111 DATA COMMUNICATIONS &amp; NETWORKS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3112 USER INTERFACE DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3115 ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3211 DATABASE SYSTEMS 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3311 OBJECT ORIENTED PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3312 INTELLIGENT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3313 SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3970 COMPUTER GRAPHICS FOR GAME PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>List C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2511 IMAGE PROCESSING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2611 LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2614 STATISTICAL DATAMINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY (I)
Course Code: SBIT

Course Objectives
The course aims to equip students with the skills required to deal with advanced data processing. Students will develop skills and conceptual understanding needed to design, install, configure and manage various advanced data management technologies, and to develop data management processes at both the intranet and Internet level for modern organizations and enterprises.

On completion of the course, students will:
- have acquired skills in the development of database applications such as relational, object-oriented and multimedia systems;
- be familiar with online transaction and application processing;
- be able to design, install, configure and maintain various data storage systems;
- have a sound understanding and competence in the use of technologies that are utilised in data warehousing and data mining;
- have a sound understanding of distributed systems, including the ability to establish and maintain data storage strategies within local area networks, wide area networks, and across the Internet.

Course Duration
The course is offered over three years full-time and part-time equivalent.

Admission Requirements
To qualify for admission to the course an applicant should have successfully completed Year 12 of the Victorian Certificate of Education (VCE), with a study score of at least 20 in English and 22 in Mathematical Methods or have the equivalent of these qualifications.

Alternatively, entry is via TAFE articulation or under mature age provisions.

Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>(if needed) – this replaces RCM1613 in Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>or</td>
<td>RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1713 DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>(for those that did ACE1145 in Semester One and this replaces the 1st year elective)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2112 OPERATING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM3002 PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3312 INTELLIGENT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3313 SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM2213 COMPUTER GRAPHICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
BACHELOR OF SCIENCE IN LOGISTICS ANALYSIS (I)

Course Code: SBLA

Campus: Footscray Park

Course Objectives

The growth in world trade is increasing in size and dynamics and the trend is likely to continue. In particular the Asia Pacific region in which Australia is located is the most dynamic. As a profession, Logistics is core to the efficiency of such growth and as a consequence there is a growing need for expertise in the systems and analysis associated with the industry. The Logistics industry is heavily dependent on the development and maintenance of the systems associated with movement of materials and the associated services. The logistics computer systems deliver the operating effectiveness and delivery of service. The assessment of professionalism within the industry is directly related to the logistics systems that an enterprise can provide to its customers and suppliers.

The Bachelor of Science in Logistics Analysis provides specialised logistic education for those professionals working in the logistics and related operations businesses. This includes technicians and junior managers in logistics, manufacturing and service organisations and those aspiring to those roles. Secondly there are many operating personnel who have not had the opportunity to formalise their education and this program will provide that opportunity.

The course brings together a range of knowledge and skills that are needed by such managers. It provides a strong foundation in technical, logistics and people skills. It has attractions not only in the logistics industry but also in manufacturing, mining, utilities, information technology, defence and service operations.

Course Duration

3 years full time or equivalent part time.

Admission Requirements

To qualify for admission to the course an applicant must have successfully completed course of study at year 12 level or equivalent. In addition to satisfying the entry requirements for Australian resident students or demonstrating equivalence, overseas students must provide evidence of proficiency in the English language, as follows: International English Testing System – a minimum overall test score of 6.0 and no individual band score of less than 5.5.

Other Course Specific Notes To qualify for the award of Bachelor of Science in Information Technology, a total of 288 credit points are needed. No stage completions exist for this course. Additionally, students must complete a minimum of two electives from List B.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM2914 PROJECT AND INVENTORY ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>(AUS$)</td>
<td>(AUS$)</td>
</tr>
<tr>
<td>BEO4123 GLOBAL LOGISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>BEO3203 SUPPLY AND VALUE NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM3021 LOGISTICS ANALYSIS AND SOLUTIONS</td>
<td>12</td>
<td>0.1250</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Electives
8 Electives Approved by Course Coordinator.

**GRADUATE DIPLOMA IN COMPUTER AND MATHEMATICAL SCIENCES**

**Course Code:** SGCM

**Course Objectives**
The Graduate Diploma programs are designed for graduates who want to acquire professional competence in Computer Science and/or the Mathematical Sciences.

Each Graduate Diploma develops graduates who have a sound conceptual foundation, including practical understanding of recent developments in computer technology and how these may be applied to solve a wide range of problems in business and industry. The Graduate Diploma in Computer and Mathematical Sciences offers a strong mathematical sciences component.

**Admission Requirements**
Enter to each course is open to applicants with a first degree. Preference will be given to applicants whose degree contains major studies in a quantitative discipline. Other applicants whose occupation or experience indicates that they have the capacity to succeed may be accepted into the course.

**Course Duration**
Each course is offered on both a full-time (one year) and a part-time basis. Part-time students will normally take two years to complete the course. Lectures will normally be offered in the evenings, however, some of the subjects are available during the day.

**Course Structure**
Two streams of subjects are available:
- Computer Science;
  - Computer Programming;
  - Information Systems;
  - Multimedia & Networking;
  - Software Engineering;
- Mathematical Sciences;
  - Production and Distribution Management;
  - Modelling for Finance;
  - Data Analysis.

The courses provide maximum flexibility allowing specialisation in either one or a combination of the two streams.

To complete a Graduate Diploma, students are required to pass four Computer Science subjects and four Mathematical subjects.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Multimedia & Networking;
- Software Engineering;
- Mathematical Sciences;
- Production and Distribution Management;
- Modelling for Finance;
- Data Analysis.

The courses provide maximum flexibility allowing specialisation in either one or a combination of the two streams.

To complete a Graduate Diploma, students are required to pass four Computer Science subjects and four Mathematical subjects.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM5800</td>
<td>OBJECT ORIENTED PROGRAMMING GD1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5802</td>
<td>INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5805</td>
<td>COMMUNICATION AND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5821</td>
<td>INTRODUCTION TO MULTIMEDIA SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5807</td>
<td>ADVANCED INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5820</td>
<td>NETWORK OPERATING SYSTEMS ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5822</td>
<td>NETWORK MULTIMEDIA SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5824</td>
<td>OBJECT ORIENTED PROGRAMMING GD2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

GRADUATE DIPLOMA IN MULTIMEDIA INFORMATION NETWORKING

Course Code: SGMN

Course Objectives

The aim of this course is to impart fundamental knowledge and training to people with non-computing backgrounds in the application and development of Multimedia Information Networks.

The fundamental knowledge provides students with the ability to adapt to different computing platforms, application environments and rapid technological advancements encountered in the workplace.

Students will be able to gain employment in the Network Management area, as well as in the areas of Multimedia systems development, and Multimedia applications.

Admission Requirements

To qualify for admission to the course an applicant must have successfully completed an undergraduate degree in a non-computing discipline. Equivalent academic standing based on successful completion of recognised courses and industrial experience may also be considered sufficient for admission to the course.

Course Duration

Graduate Diploma in Multimedia Information Networking will require one year of full-time study, or equivalent part-time study. Classes will be scheduled to cater for part-time students.

Course Structure

The course will cover the following four areas, each comprising two subjects:

- computer systems and programming;
- information systems;
- data communication and networks;
- multimedia systems.

The subjects offered in the course are:

RCM5800 | OBJECT ORIENTED PROGRAMMING GD1 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5802 | INFORMATION SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5805 | COMMUNICATION AND NETWORKS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5821 | INTRODUCTION TO MULTIMEDIA SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5820 | NETWORK OPERATING SYSTEMS ADMINISTRATION | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5822 | NETWORK MULTIMEDIA SYSTEMS | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |
RCM5824 | OBJECT ORIENTED PROGRAMMING GD2 | 12 | 0.1250 | 2 | $726 | $908 | $1,584 |

GRADUATE DIPLOMA IN SOFTWARE ENGINEERING

Course Code: SGSE

Course Objectives

The Graduate Diploma program is designed for graduates who want to acquire professional competence in software engineering.

The Graduate Diploma program develops graduates to have a sound knowledge and technical skills in the areas of software specification, design, implementation and management. This program has strong programming and software engineering components.

Successful students can articulate with full credit into the Master of Science in Software Engineering program.

Admission Requirements

Entry to this course is open to applicants with a first degree in computing. Preference will be given to applicants whose degree contains major studies in a quantitative discipline. Other applicants whose occupation or experience indicates that they have the capacity to succeed may be accepted into the course.

Course Duration

The course is offered on both a full-time (one year) and a part-time basis. Part-time students will normally take two years to complete the course. Lectures will normally be offered in the evenings, however, some of the subjects are available during the day.
To complete the Graduate Diploma in Software Engineering requires the successful completion of four core subjects and four elective subjects.

**Semester 1**
- RCM6822 INTERNET PROGRAMMING 12 0.1250 2 $726 $908 $1,584
- RCM6844 SOFTWARE ENGINEERING 1 12 0.1250 2 $726 $908 $1,584
- AND TWO x Approved Electives in Computer Science (12 credit points each)

**Semester 2**
- RCM5824 OBJECT ORIENTED PROGRAMMING GD2 12 0.1250 2 $726 $908 $1,584
- RCM6841 SOFTWARE ENGINEERING 2 12 0.1250 2 $726 $908 $1,584
- AND TWO x Approved Electives in Computer Science (12 credit points each)

**BACHELOR OF SCIENCE (HONOURS) IN COMPUTER SCIENCE (I)**

**Course Code:** SHCS

Students who do exceptionally well in their degree studies may be given the opportunity to gain an Honours degree by completing a fourth year of study in a specific field. This year is designed to assist students who may wish to proceed to higher degrees by research, but it also enables students to concentrate their studies more intensely on areas of particular interest.

The Honours year requires students to select coursework units from one of the fields of Computer Science, Statistics, and Operations Research. As well, a minor thesis must be completed.

**Course Structure**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6106 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RCM6827 RESEARCH PERSPECTIVES IN COMPUTER SCIENCE 1 approved Computer and Science elective (1 x 12 credit points)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6107 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>2 approved Computer and Science electives – (2 x 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BACHELOR OF SCIENCE (HONOURS) COMPUTER SCIENCE AND MATHEMATICS (I)**

**Course Code:** SHMM

Students who do exceptionally well in their degree studies may be given the opportunity to gain an Honours degree by completing a fourth year of study in a specific field. This year is designed to assist students who may wish to proceed to higher degrees by research, but it also enables students to concentrate their studies more intensely on areas of particular interest.

The Honours year requires students to select coursework units from one of the fields of Computer Science, Statistics, and Operations Research. As well, a minor thesis must be completed.

**Course Structure**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6106 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RCM6827 RESEARCH PERSPECTIVES IN COMPUTER SCIENCE AND ONE approved elective (12 credit points)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND TWO approved Maths/Stats electives (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6107 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**MASTER OF SCIENCE IN COMPUTER AND MATHEMATICAL SCIENCES (I)**

**Course Code:** SMCM

The Masters programs develop a sound theoretical knowledge of contemporary Computer Science techniques and/or the techniques in one specified field of study from the Mathematical Sciences. Emphasis is also placed on the application of these techniques in areas of business and industry.

**Admission Requirements**

To qualify for admission to the course an applicant must have successfully completed an appropriate degree or an equivalent combination of qualifications and experience.

Applicants must be competent in tertiary level mathematics and computing.

Applicants with any of the following qualifications may apply for credits against specific coursework subjects up to the indicated maximum.

(a) A degree in computer science (4).

(b) A four year honours degree in computer science (12).

(c) A pass degree (without a major in computer science) followed by an appropriate graduate diploma (8).

(d) A combination of qualifications and experience equivalent to (a), (b), or (c) above.

**Course Duration**

The course is offered on a full-time basis over two years or on an equivalent part-time basis.

**Course Structure**

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 x Approved Electives in Computer Science 1 48</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>4 x Approved Electives in Computer Science 2 48</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>
### Mathematical Science Subjects

#### Year 1
- 2 x Approved Electives in Computer Science 1 24
- 2 x Approved Electives in Mathematics 1 24
- 2 x Approved Electives in Computer Science 2 24
- 2 x Approved Electives in Mathematics 2 24

#### Year 2
- 2 x Approved Electives in Computer Science 1 24
- 2 x Approved Electives in Mathematics 1 24

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6103</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RCM6102</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

### Thesis

- Students must obtain a pass in 14 semester units and a thesis equivalent to two semester units; or 12 semester units and a thesis equivalent to four semester units.
- For the award of MSc in Computer Science, at least 8 units must be selected from the Computer Science stream. For the award of MSc in Computer and Mathematical Sciences, at least 6 units must be selected from the Mathematical Sciences stream.

### Master of Science in Computer Science (I)

**Course Code:** SMCS

**Course Objectives**
The Masters programs develop a sound theoretical knowledge of contemporary Computer Science techniques and/or the techniques in one specified field of study from the Mathematical Sciences. Emphasis is also placed on the application of these techniques in areas of business and industry.

**Admission Requirements**
To qualify for admission to the course an applicant must have successfully completed an appropriate degree or an equivalent combination of qualifications and experience.

- Applicants must be competent in tertiary level mathematics and computing.
- Applicants with any of the following qualifications may apply for credits against specific coursework subjects up to the indicated maximum:
  - (a) A degree in computer science (4).
  - (b) A four year honours degree in computer science (12).
  - (c) A pass degree (without a major in computer science) followed by an appropriate graduate diploma (8).
  - (d) A combination of qualifications and experience equivalent to (a), (b), or (c) above.

**Course Duration**
The course is offered on a full-time basis over two years or on an equivalent part-time basis.

**Course Structure**

#### Year 1

**Semester 1**
- 4 x Approved Electives in Computer Science (12 credit points each)

**Semester 2**
- 4 x Approved Electives in Computer Science (12 credit points each)

**Year 2**
- 4 x Approved Electives (12 credit points each)

#### Semester 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6103</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>OR</td>
<td>RCM6102</td>
<td>24</td>
<td>0.2500</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

- AND 2 Approved Electives (12 credit points each)

**Elective List**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM5601</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5602</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5803</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6105</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6606</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6607</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6819</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6821</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6822</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6814</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6820</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6823</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6825</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6902</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6904</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
must provide evidence of proficiency in the English Language as follows:

For international students the requirements are the same as for all School of Computer Science and Mathematics PG courses. Overseas students admission may be required to undertake additional or preliminary coursework as directed by the Course Coordinator.

The course brings together a range of knowledge and skills that are needed by such managers. It provides a strong foundation in technical, logistics service operations.

The Logistics industry is heavily dependent on the development and maintenance of the systems associated with movement of materials and the associated services. The logistics/engineering systems deliver the operating reliability and maintenance effectiveness and delivery of service.

The assessment of professionalism within the industry is directly related to the logistics systems and support that an enterprise can provide to its own functions as well as those of its customer and suppliers.

The Master of Science in Logistics Systems and Support provides specialised logistic education for those professionals working in the senior logistics positions and related operations businesses. This includes senior technical managers and executives in logistics, manufacturing and service organisations and those aspiring to those roles.

The course brings together a range of knowledge and skills that are needed by such managers. It provides a strong foundation in technical, logistics and people skills. It has attractions not only in the logistics industry but also manufacturing, mining, utilities, information technology, defence and service operations.

Course Duration
18 months

Admission Requirements
To qualify for admission to the course an applicant must have normally completed successfully a relevant degree with good grades, or a post graduate diploma plus adequate work experience in an employment associated with logistics or transport management. Students who gain admission may be required to undertake additional or preliminary coursework as directed by the Course Coordinator.

For international students the requirements are the same as for all School of Computer Science and Mathematics PG courses. Overseas students must provide evidence of proficiency in the English Language as follows:

International English Testing System – a minimum overall test score of 6.5 and no individual band score of less than 6.0.

Course Structure

<table>
<thead>
<tr>
<th>Course Code:</th>
<th>SMLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6905 SEQUENCING AND SCHEDULING</td>
<td>12</td>
</tr>
<tr>
<td>RCM6906 OPTIMISATION TECHNIQUES</td>
<td>12</td>
</tr>
</tbody>
</table>

Students must obtain a pass in 14 semester units and a thesis equivalent to two semester units; or 12 semester units and a thesis equivalent to four semester units.

For the award of MSc in Computer Science, at least 8 units must be selected from the Computer Science stream. For the award of MSc in Computer and Mathematical Sciences, at least 6 units must be selected from the Mathematical Sciences stream.

Thesis
Where possible the candidate will be encouraged to choose a topic related to his/her own work situation.

RCM6102 THESIS (2 UNITS) | 24 | 0.2500 | 2 | $1,452 | $1,815 | $3,168 |
RCM6103 THESIS (4 UNITS) | 48 | 0.5000 | 2 | $2,904 | $3,630 | $6,336 |

Masters of Science in Software Engineering (I)
Course Code: SMSE

Course Objectives
The Master of Science in Software Engineering provides students with the basic knowledge and technical skills in the areas of software specification, design and implementation. Specific skills pertinent to the development and management of large software projects. Human communication skills including the professional presentation of ideas, designs and solutions, and the documentation associated with software development projects. Human communication skills including the professional presentation of ideas, designs and solutions, and the documentation associated with software development projects. Management skills, in relation to: a software project from concept to delivery; the units derived during software development; people, as part of a team and as a leader. The ability to deal with constantly changing technology by using knowledge and understanding of concepts and applying them to real problems in a variety of contexts. Professional awareness, including social and legal responsibility and ethics.

Admission Requirements
To qualify for admission to the course an applicant must have successfully completed an appropriate degree or an equivalent combination of qualifications and experience. Applicants must be competent in tertiary level mathematics and computing (which may have to be demonstrated in special tests). Applicants with any of the following qualifications may apply for credits against specific coursework subjects up to the indicated maximum:
(a) A degree in with major studies in software engineering(4)
(b) A four year honours degree in (12)
(c) A pass degree (without a major in software engineering) followed by software engineering graduate diploma (8)
(d) A combination of qualifications and experience equivalent to (a), (b), or (c) above.

Course Duration
The course is offered on a full-time basis over two years or on an equivalent part-time basis.
For candidates given credit, the minimum duration must be at least the equivalent of one and a half years of full-time study following a three year degree.

Course Structure
To complete the Master of Science in Software Engineering requires the successful completion of eight cores subjects, six elective subjects and a minor thesis, (2 subject equivalence), or eight core subjects, four elective subjects and a major thesis, (4 subject equivalence).

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005</th>
<th>From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>Year 1</td>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6844 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM6710 INTERNET DATA MANAGEMENT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>AND TWO Approved Electives in Computer Science (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6841 SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM6843 SOFTWARE ENGINEERING PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM6702 INTERNET DATA REPRESENTATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>AND ONE Approved Electives (12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6846 OBJECT ORIENTED DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM6842 ADVANCED TOPICS IN SOFTWARE ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCM6845 OBJECT ORIENTED TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>AND One Approved Elective (12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6102 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>AND TWO Approved Electives (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6103 THESIS (4 UNITS)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
</tbody>
</table>

MASTER OF SCIENCE (RESEARCH) (1)
Course Code: SRHC, SRLC, SROT

Course Structure

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005</th>
<th>From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>RCM8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>RCM8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>RCM8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>RCM8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
</tbody>
</table>

Coursework Programs
The School offers a range of coursework programs at postgraduate level:
- Graduate Diplomas in:
  - Computer Science
  - Computer and Mathematical Sciences
  - Multimedia Information Networking
  - Software Engineering
- Master of Science in:
  - Computer Science
  - Computer and Mathematical Sciences
  - Software Engineering
SUBJECTS

Below are subject details for courses offered by the School of Computer Science and Mathematics in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

RCA1010 INTRODUCTORY AVIATION
Campus Footscray Park
Prerequisite(s) Nil.
Content Aerodynamics and theory of flight, flight control systems, basic instruments. Domestic and international flight procedures, social structure of the regulatory system, domestic and international. Domestic legal rules, international treaties, domestic safety systems and safety experience. International safety experience.
Required Reading As set by the lecturer in charge.
Recommended Reading As recommended by the lecturer in charge.
Class Contact One four hour seminar per week for one semester.
Assessment One major assignment 30% and one final examination 70%.

RCA1020 BASIC AERONAUTICAL KNOWLEDGE
Campus Footscray Park
Prerequisite(s) RCA1010 (The Civil Aviation Safety Authority also expects that students will have flown five hours before attempting this subject).
Content Basic Aeronautics, engineering and mechanics sufficient to pass the BAK test required by the CASA.
Required Reading As required by the lecturer in charge.
Recommended Reading As recommended by the Lecturer in charge.
Class Contact The equivalent of one four hour seminar per week for one semester. A concentrated mode of delivery may be used. Students may be required to attend classes off campus. Students should be aware that they are expected to obtain five hours flying experience on their own account before attempting the examination this subject.
Assessment One final (principally multiple choice) examination worth 100% as required by the Civil Aviation Safety Authority.

RCA2020 METEOROLOGY AND HUMAN FACTORS FOR THE CPL
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft navigation theory, and legal theory as required for the Commercial Pilot’s Licence theory subjects ‘CHUF Human Factors (Aeroplane and Helicopter) for the CPL’ and ‘CMET Meteorology (Aeroplane and Helicopter) for the CPL’ examined by the Civil Aviation Safety Authority.
Required Reading As required by the Lecturer in charge.
Recommended Reading As recommended by the Lecturer in charge.
Class Contact The equivalent of one four hour seminar per week for one semester. Students may be required to undertake multiple seminars each week, for less than one semester.
Assessment Two Multiple Choice Examination as required by the Civil Aviation Safety Authority.

RCA2030 NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft navigation theory, and legal theory as required for the Commercial Pilot’s Licence theory subjects ‘CNAV Navigation (Aeroplane and Helicopter) for the CPL’ and ‘CLWA Flight rules and Air Law (Aeroplane and Helicopter) for the CPL’ examined by the Civil Aviation Safety Authority.
Required Reading As required by the Lecturer in charge.
Recommended Reading As advised by the Lecturer in Charge of the subject.
Class Contact The equivalent of one four hour seminar per week for one semester. Students may be required to undertake multiple seminars each week, for less than one semester.
Assessment Two Multiple Choice Examination as required by the Civil Aviation Safety Authority.

RCA2040 AERODYNAMICS FOR THE CPL
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft navigation theory, and legal theory as required for the Commercial Pilot’s Licence theory subjects ‘CADA Aerodynamics (Aeroplane and Helicopter) for the CPL’ examined by the Civil Aviation Safety Authority.
Required Reading As advised by the Lecturer in Charge of the subject.
Recommended Reading As advised by the Lecturer in Charge of the subject.
Class Contact The equivalent of one four hour seminar per week for one semester. Students may be required to undertake multiple seminars each week, for less than one semester.
Assessment Two Multiple Choice Examination as required by the Civil Aviation Safety Authority.

RCA2050 AIRCRAFT GENERAL KNOWLEDGE FOR THE CPL
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft navigation theory, and legal theory as required for the Commercial Pilot’s Licence theory subjects ‘CSYA Aircraft General Knowledge for the CPL’ examined by the Civil Aviation Safety Authority.
Required Reading As advised by the Lecturer in Charge of the subject.
Recommended Reading As advised by the Lecturer in Charge of the subject.
Class Contact The equivalent of one four hour seminar per week for one semester. Students may be required to undertake multiple seminars each week, for less than one semester.
Assessment One Multiple Choice Examination as required by the Civil Aviation Safety Authority.

RCA2060 OPERATIONS PERFORMANCE AND FLIGHT PLANNING FOR THE CPL
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft Operations theory, and flight planning as required for the Commercial Pilot’s Licence theory subject ‘CFPA CPL Operations Performance and Flight Planning’ examined by the Civil Aviation Safety Authority.
Required Reading As advised by the Lecturer in Charge of the subject.
Recommended Reading As advised by the Lecturer in Charge of the subject.
Class Contact The equivalent of one four hour seminar per week for one semester. Students may be required to undertake multiple seminars each week, for less than one semester.
Assessment One Multiple Choice Examination as required by the Civil Aviation Safety Authority.

RCA3010 INSTRUMENT RATING (IREX)
Campus Footscray Park
Prerequisite(s) RCA1020 Basic Aeronautical Knowledge (the Civil Aviation Safety Authority requires students to complete the General Flying Proficiency Test before attempting this subject).
Content Aircraft flight planning theory sufficient to complete the IREX examination set by the Civil Aviation Safety Authority.
Class Contact 2 x three hour workshops per week for one semester, or equivalent.
Assessment Examination as required by the Civil Aviation Safety Authority.
RCA3030 METEOROLOGY AND HUMAN FACTORS FOR THE ATPL
Campus Footscray Park
Prerequisite(s) RCA 2020, RCA 2030, RCA 2040, RCA 2050, RCA 2060.
Content Meteorology and Human Factors sufficient to meet the requirements of the CASA examinations in these topics.
Required Reading To be advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact The equivalent of one three hour seminar each week for one semester.
Assessment One 90 minute multiple choice examination and one 60 minute multiple choice examination.

RCA3040 FLIGHT PLANNING FOR THE ATPL
Campus Footscray Park
Prerequisite(s) SCA2051, SCA2053, SCA2055, SCA2057, SCA2059, SCA2061, SCA2063
Content Aircraft flight planning theory sufficient to pass the Air Transport Pilot's Licence subject 'ATPL Flight Planning’ examined by the Civil Aviation Safety Authority.
Required Reading Thom, T. et al, 2000, Aeroplane Operations Performance and Planning for the Air Transport Pilot, Aviation Theory Centre, Melbourne. Subject study notes as provided by the subject lecturer.
Class Contact 1 x three hour workshops per week for one semester, or equivalent.
Assessment Examination as required by the Civil Aviation Safety Authority.

RCA3050 NAVIGATION AND AIR LAW FOR THE ATPL
Campus Footscray Park
Prerequisite(s) RCA 2020, RCA 2030, RCA 2040, RCA 2050, RCA 2060.
Content Navigation and flight and air law sufficient to meet the requirements of the CASA examinations in these topics.
Required Reading To be advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact The equivalent of one three hour seminar each week for one semester.
Assessment Two 90 minute multiple choice examinations.

RCA3060 AERODYNAMICS AND AIRCRAFT SYSTEMS FOR THE ATPL
Campus Footscray Park
Prerequisite(s) TBA
Content Aircraft aerodynamics and systems theory sufficient to pass the Air Transport Pilot's Licence subject 'ATPL Aerodynamics and Systems’ examined by the Civil Aviation Safety Authority
Required Reading Thom, T. et al, 2000, Aeroplane Operations Performance and Planning for the Air Transport Pilot, Aviation Theory Centre, Melbourne. Subject study notes as provided by the subject lecturer.
Class Contact 1 x three hour workshop per week for one semester or equivalent.
Assessment Examination as required by the Civil Aviation Safety Authority.

RCA3070 PERFORMANCE AND LOADING FOR THE ATPL
Campus Footscray Park
Prerequisite(s) RCA 2020, RCA 2030, RCA 2040, RCA 2050, RCA 2060.
Content Aircraft performance theory, and loading theory sufficient to pass the Air Transport Pilot's Licence subject 'ATPL Performance and Loading’ examined by the Civil Aviation Safety Authority.
Required Reading Thom, T. et al, 2000, Aeroplane Operations Performance and Planning for the Air Transport Pilot, Aviation Theory Centre, Melbourne. Subject study notes as provided by the subject lecturer.
Class Contact 1 x three hour workshop per week for one semester or equivalent.
Assessment Examination as required by the Civil Aviation Safety Authority.

RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET
Campus Footscray Park, Hong Kong, Malaysia, Singapore
Prerequisite(s) Nil.
Content Algorithms for computational tasks, Overview of the Internet, Internet Connections, Web Design and Authoring, Characteristics and functions of browsers, Resources on the Internet, Surfing the Internet, Future of the Internet, Scripting Languages, The law and computer crimes, Reliability and safety of software systems, Australian Computer Society code of ethics.
Required Reading Ibrahim, Z., 2000, Mastering the Internet and HTML, Prentice Hall.
Class Contact Three hours per week for one semester, comprising one hour lecture and two hour laboratory/tutorial.
Assessment Final examination 70%; assignment/laboratory work, 30%.

RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE
Campus Footscray Park, Hong Kong
Prerequisite(s) Nil.
Required Reading Nil.
Recommended Reading Brookshear, J.G., 2005, Computer Science: An Overview, 8th edn, Addison-Wesley.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; assignment and tests, 30%.

RCM1211 DATABASE SYSTEMS 1
Campus Footscray Park, Hong Kong
Prerequisite(s) RCM1115 Computer Systems and Architecture; RCM1311 Programming 1.
Recommended Reading Data, C.J. 2004, An Introduction to Database Systems, 8th edn, Addison-Wesley.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; assignment and tests, 30%.

RCM1311 PROGRAMMING 1
Campus Footscray Park, Hong Kong
Prerequisite(s) Nil.
Content Introduction to object oriented programming. Basic constructs of a programming language; sequence, selection and iteration. Use of classes and objects. Applets.
Recommended Reading Savitch, W., 2006, Absolute Java
Class Contact Four hours per week for one semester, comprising two hours of lectures and two hours of laboratory/tutorial.
Assessment Final examination, 70%; assignment, exercises and practical work, 30%.

RCM1312 PROGRAMMING 2
Campus Footscray Park, Sydney, Hong Kong, Tianjin
Prerequisite(s) SCM1311 Programming 1.
Content Structured program development through user defined classes. Array, vectors and string data types. File I/O. Inheritance, exceptions, graphical user interface.

Prerequisite(s) Nil.

Required Reading Albright, Winston, Zappe, Data Analysis for Managers, 2nd edn, Thompson.


Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour tutorials.

Assessment Final examination, 60%; assignment, test and practical work, 30%.

RCM1613 APPLIED STATISTICS 1

Campus Footscray Park, Sydney

Prerequisite(s) Nil.

Content Displaying and describing data. Control charts, Time series, Experimental design, Survey designs.

Required Reading Albright, Winston, Zappe, Data Analysis for Managers, 2nd edn, Addison-Wesley.


Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour tutorials.

Assessment Final examination, 70%; assignment, test and practical work, 30%.

RCM1614 APPLIED STATISTICS 2

Campus Footscray Park, Hong Kong

Prerequisite(s) RCM1613 Applied Statistics 1.


Required Reading Albright, Winston, Zappe, Data Analysis for Managers, 2nd edn, Thompson.


Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour tutorials.

Assessment Final examination, 60%; tests, 40%.

RCM1711 MATHEMATICAL FOUNDATIONS 1

Campus Footscray Park

Prerequisite(s) VCE Mathematical Methods or equivalent.

Content Set theory: basic principles, operations and applications. Propositional logic and Boolean algebra. Introduction to calculus: limits, derivatives; applications to analysis of functions and solution of non-linear equations. Integration and its relationship to differentiation. Linear algebra: vectors, matrices; applications to geometry and linear equations. Use of computer algebra systems for exploration and enhancement.


Class Contact Two hours per week of lectures; one hour per week of tutorial and one hour per week of laboratory work.

Assessment Final examination, 75%; mid semester test, 15%; laboratory work, 10%.

RCM1712 MATHEMATICAL FOUNDATIONS 2

Campus Footscray Park

Prerequisite(s) RCM1711 Mathematical Foundations 1.


Learning Outcomes Lectures, tutorials, and computer laboratories. This subject aims to avoid teaching mathematics as a recipe book of techniques, but instead emphasises experimentation and applications.

Required Reading Combinatorics & Calculus: Notes for RCM1712 Mathematical Foundations 2, Alasdair McAndrew, VUT Press


Class Contact Two hour lecture, one hour tutorial, one hour computer laboratory, per week.

Assessment 15% laboratory work, 15% mid semester test, 70% final examination.

RCM1713 DISCRETE MATHEMATICS

Campus Footscray Park, Hong Kong

Prerequisite(s) RCM1711 Mathematical Foundations 1.

Content Introduction to the computer algebra system Maple. Recursive Functions. Algorithmic worst case and asymptotic analysis. Graph theory – definitions, terminology, adjacency, incidence, paths, cycles, multigraphs, digraphs, weighted graphs, Eulerian graphs and digraphs, Hamiltonian graphs and digraphs, path algorithms, trees, graph colouring, matching, introduction to the computer algebra system Maple.

Required Reading Discrete Mathematics, Notes for RCM1713, Alasdair McAndrew


Class Contact Four hours per week for one semester, comprising two hours of lectures, and two hour of laboratory/one hour tutorial.

Assessment Final examination, 70%; tests, 30%.

RCM2111 DATA COMMUNICATIONS AND NETWORKS 1

Campus Footscray Park, Hong Kong

Prerequisite(s) RCM1115 Computer Systems and Architecture.


Class Contact Four hours per week for one semester, comprising three one-hour lectures and two one-hour laboratory/tutorial.

Assessment Final examination, 80%; assignment and tests, 20%.

RCM2112 OPERATING SYSTEMS

Campus Footscray Park, Hong Kong, Malaysia, Singapore

Prerequisite(s) RCM1115.


Class Contact Four hours per week for one semester, comprising two one-hour lectures and two hours laboratory/tutorial.

Assessment Final examination, 80%; assignment(s) 20%.

RCM2113 MULTIMEDIA SYSTEMS DESIGN

Campus Footscray Park

Prerequisite(s) RCM1114 Introduction to Computing and the Internet.

Content Introduction to the computer algebra system Maple. Recursive Functions. Algorithmic worst case and asymptotic analysis, o, O and T notation. Algorithm design – greedy algorithms.

Learning Outcomes Students will gain confidence in analysing algorithms for speed and efficiency, using formal and informal methods, as well as an ability to solve practical and applied problems in graph/network theory.

Required Reading Discrete Mathematics, Notes for RCM1713, Alasdair McAndrew


Class Contact Four hours per week for one semester, comprising two hours of lectures, and two hour of laboratory/one hour tutorial.

Assessment Final examination, 70%; tests, 30%.

SCHOOL OF COMPUTER SCIENCE AND MATHEMATICS
Assessment

Class Contact


Class Contact

Four hours per week for one semester, comprising one two-hour lectures and one two-hour laboratory/tutorial.

Assessment

Final examination, 70%; assignment and tests, 30%.

RCM2213 COMPUTER GRAPHICS

Campus Footscray Park

Prerequisite(s) RCM1312 Programming 2 or equivalent.

Content

This subject introduces the principles of computer graphics and the art in the representation of 2D and 3D pictures, and gives experience in using graphics package OpenGL. The topics coverage also includes popular graphics algorithms and techniques for generating 2D and 3D animations. In addition, some advanced topics, such as curves, surface and shading are discussed. Students will have considerable practice in 2D and 3D graphics programming with package OpenGL.

Required Reading


Recommended Reading


Class Contact

Two one-hour lectures and two one-hour laboratory for one semester.

Assessment

Laboratory, 10%; Two assignment, 30%; Final examination, 60%.

RCM2218 DATABASE SYSTEMS 2

Campus Footscray Park, Sydney, Hong Kong, Malaysia

Prerequisite(s) RCM1211 Database Systems 1, or equivalent.

Content

Data analysis and modelling using the Enhanced Entity-Relationship model and normalization. Constraints beyond the EER model, and advanced data modeling issues. Database transactions: concept, ACID properties, specification, Transaction processing: commit and rollback, concurrency control, locking, scheduling, and recovery. Database application development using embedded SQL.

Required Reading

To be advised by lecturer.

Recommended Reading


Class Contact

Two-hour lecture and two-hour laboratory per week.

Assessment

Final examination, 80%; tests, 20%.

RCM2311 OBJECT ORIENTED PROGRAMMING 1

Campus Footscray Park, Sydney, Hong Kong, Malaysia

Prerequisite(s) RCM1312 Programming 2

Content

This subject covers the critical concepts and features that support object-oriented programming. Classes and data abstraction, graphical user interfaces, threads, streams, exceptions and system design and Multimedia applications. Mastery of these concepts provide the foundation to practice object-oriented programming in a productive way and the subsequent mastery of the finer points of object-oriented programming.

Required Reading

To be advised by lecturer.

Recommended Reading


Class Contact

Four hours per week for one semester, comprising two hours of lectures and two hour of laboratory/tutorial.

Assessment

Final examination, 70%; assignment, and practical work 30%.

RCM2312 SOFTWARE ENGINEERING 1

Campus Footscray Park, Sydney, Hong Kong

Prerequisite(s) RCM1312 Programming 1; RCM1312 Programming 2.

Content

This subject represents an introduction to traditional software development and object oriented analysis and design. It is designed to prepare students for final year computer projects. Topics to be covered include: software life cycle, requirements analysis and specification, structured and object oriented design, documentation of software systems. Testing. Reusability and Portability. Planning and Estimating. Implementation.

Required Reading


Recommended Reading

To be advised by lecturer.

Class Contact

Four hours per week for one semester, comprising three one-hour lectures and one one-hour laboratory/tutorial.

Assessment

Final examination, 80%; assignments: 20%.

RCM2313 SOFTWARE DEVELOPMENT

Campus Footscray Park, Sydney, Hong Kong

Prerequisite(s) RCM2312 Software Engineering 1, RCM1312 Programming 2

Content

The aim of this subject is to develop an appreciation of the process whereby software is developed in a production environment students will build upon and reinforce their knowledge of software engineering principles by working in a team on a real-life production project.

Recommended Reading


Class Contact

Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.

Assessment

Final examination, 20%; Labs, 30%; Assignments, 25% Mid-Semester Test, 25% Final Test.

In order to pass, students must obtain at least 25% of labs and assignments, and 25% of tests in this subject.

RCM2315 ADVANCED PROGRAMMING

Campus Footscray Park, Hong Kong, Malaysia, Singapore

Prerequisite(s) RCM1312 Programming 2

Content

Fundamental data types; Class definition; Polymorphism; Operator overloading; Characters and strings; Input & Output; Exception handling; Data Structures and collections; Features and facilities found in this programming language.

Required Reading

To be advised by lecturer.

Recommended Reading


Class Contact

Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.

Assessment

Final examination, 70%; assignment and tests: 30%.

RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION

Campus Footscray Park

Prerequisite(s) RCM2111 Data Communications and Networks 1.

Content

Protocols and Standards. TCP/IP protocol suite, connecting devices. Addressing. Routing. ARP. IP. ICMP. IGMP. UDP. TCP. SCTP. Multicasting. DNS. TELNET. SMTP. SNMP.

Required Reading


Recommended Reading


Class Contact

Four hours per week for one semester comprising of two one hour lectures and one one hour laboratory and one hour tutorial.

Assessment

Final examination, 80%; laboratory work 20%.

RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B

Campus Footscray Park

Prerequisite(s) RCM2712 Mathematics of Continuous Processes A.

Content

Matrix Algebra: matrices, vectors, norms, matrix equations, inverse, Gauss-Jordan and LU decomposition. Linear Algebra: linear dependence, span, vector spaces, basis, orthogonal expansions, the eigenvalue problem, eigenvectors, special matrices, properties of the characteristic equation, diagonalisation, symmetric forms, singular value decomposition, Cayley-Hamilton, matrix functions and matrix polynomials. Differential Equations: reduction of order, variation of parameters, Green’s methods for ordinary differential equations, Dirac delta and unit Heaviside function, method of separation of variables for
partial differential equations, solution via Laplace transform and Fourier series, boundary value problems and initial value problems.

**Required Reading**


**Class Contact** 2 x one hour lecture and 2 x one hour tutorial for one semester.

**Assessment** 20% mid-semester test; 80% end of semester examination.

**RCM2511 IMAGE PROCESSING 1**

- **Campus** Footscray Park, Sydney, Malaysia
- **Prerequisite(s)** RCM114 Introduction to Computing and the Internet, and one of RCM1171 or RCM1172.
- **Co-requisites** Nil
- **Required Reading** None.
- **Class Contact** Two hours of lectures, one hour of practical work, one hour tutorial per week.
- **Assessment** Final examination 75%, laboratory assessment 25%;

**RCM2611 LINEAR STATISTICAL MODELS**

- **Campus** Footscray Park
- **Prerequisite(s)** RCM1614 Applied Statistics 2.
- **Class Contact** Four hours per week for one semester, comprising one two-hour lecture and one one-hour tutorial and one one-hour laboratory.
- **Assessment** Final examination, 70%; assignment: 30%

**RCM2612 FORECASTING**

- **Campus** Footscray Park, Sydney, Hong Kong, Malaysia
- **Prerequisite(s)** RCM1614
- **Required Reading** Nil.
- **Class Contact** Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory.
- **Assessment** Project, 40%; Examination, 60%.

**RCM2614 STATISTICAL DATAMINING**

- **Campus** Footscray Park, Hong Kong, Malaysia, Singapore
- **Prerequisite(s)** RCM1614.
- **Content** Statistical datamining methods, cluster analysis, discriminant analysis, issues in sampling and estimation, using the bootstrap, non-parametric methods.
- **Class Contact** Four hours per week for one semester, comprising two one-hour lectures, one one-hour tutorial and one one-hour practical.
- **Assessment** Final examination, 60%; assignments and tests, 40%.

**RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A**

- **Campus** Footscray Park
- **Prerequisites** RCM1712
- **Co-requisites** Nil.
- **Learning Outcomes** Lecture and tutorial work as well as small group project work.
- **Content** First order and second order differential equations. Laplace and Fourier transforms and application to differential equations. Approximation via Taylor and Fourier series and elementary extension to orthogonal expansions. Multivariate calculus: partial derivatives and chain rule, multiple integration including regions and coordinate transformation. Improper integrals as well as functions defined by integrals. Modelling of continuous processes using differential and functional equations.
- **Required Reading** Nil.
- **Class Contact** 2 x 1hr lecture and 2 x 1hr tutorial for one semester.
- **Assessment** 15% mid-semestre test (1 hour) 15% project work 70% end of semester examination (3 hours)

**RCM2713 MODELLING FOR DECISION MAKING**

- **Campus** Footscray Park, Hong Kong, Malaysia, Singapore
- **Prerequisite(s)** RCM1712.
- **Content** Overview of the modelling process: problem identification, factors and assumptions, formulation and solution, interpretation comparison of results with original problem. Setting up models, interpretation of mathematical models. Interpolation, extrapolation, spectral decomposition and fitting models to data. Applications of continuous models via differential equations and data fitting. Discrete versus continuous modelling and discrete/continuous combinations with examples of general interest in a variety of fields.
- **Class Contact** Four hours per week for one semester.
- **Assessment** Final examination, 80%; assignments, 20%.

**RCM2810 ADVANCED INTERNET PROGRAMMING**

- **Campus** Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia
- **Prerequisite(s)** RCM1114, RCM1311, RCM1711
- **Content** XHTML and JavaScript: interaction between a web-page and a user; input validation and submission of a form; response to submission of a form; connecting an OOM to a GUI. The bridge between XHTML/JavaScript and an embedded object: applets and...
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

scriptlets as examples of embedded objects; how to use XHTML to initialize parameters of an applet, and to use JavaScript to control the parameters at runtime; how to adapt an applet to read initial values of parameters from an XHTML page, and to read parameter values at run-time from an XHTML/JavaScript page; DHTML: CSS style-sheets, positioning elements, layering a page, interaction between the user and the web-page; Server-side topics: communication through sockets, creating a simple browser and a simple HTTP server, PHP, MySQL; Emerging Internet technologies such as SOAP for accessing objects, and Wireless ML for WAP-enabled devices.

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester, comprising one two-hour lecture and one two-hour laboratory/tutorial.

**Assessment**
Laboratory work, 12%; mid-semester practical examination (3 hours duration), 30%; end-of-semester practical examination (3 hours duration), 58%. In order to pass, students must obtain at least 50% of the total marks given in this subject.

**RCM2911 LINEAR OPTIMISATION MODELLING**
Campus Footscray Park

**Prerequisite(s)**
Nil

**Content**
Introduction to linear programming; Mathematical models; Graphical solution; Maximisation and minimisation problems; Spreadsheet models. Sensitivity analysis for LP; Applications of LP; Transportation problem; Assignment & Trans-shipping Simplex method; Hungarian method; Pure and mixed integer linear programming; Knapsack problems.

**Required Reading**

**Recommended Reading**
Anderson, S. W., 1999, Contemporary Management Science with Spreadsheets, South Western College Publishing.

**Class Contact**
Four hours per week; two hours and two hours tutorial and/or laboratory.

**Assessment**
Participation in tutorials, 5%; test 15%; assignment, 10%; final examination, 70% three hours; to obtain a grade of pass or better, a student must obtain 40% or more in the final examination.

**RCM2912 PROJECT SCHEDULING**
Campus Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)**
Nil

**Content**

**Required Reading**
Lecture notes provided by lecturer.

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising two hours lectures and two hour laboratory/tutorial.

**Assessment**
Two Assignments 30%, Final Examination 70%.

**RCM2914 PROJECT AND INVENTORY ANALYSIS**
Campus Footscray Park

**Prerequisite(s)**
Nil

**Co-requisite(s)**
Nil

**Learning Outcomes**
To be able to understand the life span of a business project from conception to disposal, what the elements of costs and benefits of a project are, and how alternative project proposals are evaluated. This subject also teaches various inventory issues, including the Economic Order Quantity models of Inventory Control.

**Content**
Project Life cycle: phases and costing of life cycles; Project Evaluation: time value of money, break-even analysis, payback, Return on Investment; Inventory: cost components, models for Economic Order Quantity, reorder Points, Safety Stock, Quantity Discounts.

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.

**Assessment**
Class Test 1 hour 20% P2, I2, W2, A2 One Group Assignment, 2 or 3-persons 20% P2, I2, O2, W2, C2, D2 Final Examination 3 hours 60% P2, I2, W2, A2

**RCM2915 STOCHASTIC AND COMBINATORIAL OPTIMISATION**
Campus Footscray Park, Hong Kong, Malaysia, Singapore

**Prerequisite(s)**
RCM1613 or equivalent.

**Content**
Decision Analysis: Decision Making without and with Probabilities; Decision Tress, EVPI and EVDI: Multicriteria Decision Making; Scoring Model, Analytical Hierarchy Process; Spreadsheet Analysis. Selected Combinatorial Optimisation Models: Network Models – spanning tree, shortest path, and maximum flow problems; Set Covering Problem; Cutting Stock Problem; Bin Packing Problem. Queueing Theory: Basic components of a queuing model, arrival and service time distributions; operating characteristics of a queuing system; multiple server models; no waiting time and finite calling population: Economic Analysis: Spreadsheet Analysis.

**Required Reading**

**Recommended Reading**
Anderson, Sweeney and Williams, 1999, Contemporary Management Science with Spreadsheets, South Western College Publishing. Subject notes will be supplied to supplement the textbook as necessary.

**Class Contact**
Four hours per week for one semester; two hours lecture and two hour tutorial/laboratory.

**Assessment**
Participation in Tutorials, 5%; Class Test 15%; Assignment, 10% Final examination, 70%. To obtain a grade of pass or better a student must obtain 40% or more in the final examination.

**RCM2917 LOGISTICS TECHNOLOGY AND SIMULATION**
Campus Footscray Park

**Prerequisite(s)**
RCM 1114 or equivalent

**Co-requisites**

**Learning Outcomes**
After completing the subject, a student is expected to familiar with the technologies used to identify and locate the materials, and exchanging information relevant to logistics industry. They should be able to structure a logistics problem in a form that can be simulated; Develop models and their solutions using a simulation language.

**Content**
Scope of Logistics; Logistics technologies e.g. Bar Code, RFID, EDI; Simulation modelling concepts: Application of simulation model (SIMAN, ARENA) for a logistics system.

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.

**Assessment**
Class Test 1 hour 15% P2, I2, W2, A2 One Individual Assignment 25% P2, I2, W2, A3, D2 Final Examination 3 hours 60% P2, I2, W2, A2

**RCM2930 3D WEB TECHNOLOGIES**
Campus Footscray Park, Sydney, Hong Kong, Malaysia.

**Prerequisite(s)**
RCM1311

**Content**
VRML/Java3D programming. Structure of a VR Object. Basic structures and adjustment of predefined simple and complex scenes. Adding processing capabilities to VR models by scripting languages. Adding audio-visual effects (light, sound, image texture mapping, audio and video), higher level tools for creating 3D virtual worlds and other
approaches to 3D web content; scene graphs. Creating and navigating the virtual world. Creating interactive 3D graphic models and animations by Java 3D.

**Required Reading** Lectures notes provided by the lecturer.


**Class Contact** four hours per week comprising of lectures and two hour of tutorial and computer laboratory.

**Assessment** Normally Two Assignments, 30%; final examination, 70%.

---

**RCM3001 PROJECT 1**

**Campus** Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)** 10 Electives

**Content** This subject is based and involves projects with industry sponsors selected by the University. Students work in groups under the supervision of an Academic Staff member. For computing projects students are required to submit a specification document, a final project report and demonstrate the software. For non-computing projects students are required to submit a project specification and a final project report. In addition, all groups present progress and final oral presentations to other students, staff and industry partners.

**Required Reading** Nil.

**Recommended Reading** Nil

**Class Contact** four hours per week

**Assessment** Based on performance in the projects oral presentations and quality of final project reports.

---

**RCM3002 PROJECT 2**

**Campus** Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)** ACE1145 or Year 12 English or competence in English. Must have completed year 2.

**Content** Appropriate to the project involved, the student will be required to produce a number of documents such as test plan, design project report, user manual, e-poster and CD-ROM. The student will be continually supervised under the guidance of the subject co-ordinator and their project supervisors via weekly meetings at various stages of the project.

The student’s ability as a competent communicator in industry settings will be further developed through workshop activities. The writing of a group project report, writing professional applications, preparing for and role playing interviews and developing oral presentation skills will be included in the written project reports.


**Recommended Reading** Handbook of Communication Skills for First Year Students in the Faculty of Science, Engineering and Class Contact 1x two hr project meetings with subject co-ordinator and project supervisor. 1x two hr workshop.

**Assessment** Demo Presentations, 10%; User Acceptance Test, 20%; Attendance of Meetings and Online Logbook, 5%; Documentation, User Manual, 20%; Final Presentation & e-Poster, 20% Written Employment Application, 15%; Interviews, 10%; All items of assessment must be completed in a order for a final result to be obtained in this subject.

---

**RCM3021 LOGISTICS ANALYSIS AND SOLUTIONS**

**Campus** Footscray Park, Sunbury, Werribee, Liaoning-China, Sunway-Malaysia.

**Prerequisite(s)** BEO4123 Global Logistics and BEO3203 Supply and Value Networks.

**Content** The unit of study aims to familiarise students with the process of resolving logistics related business problems through the process of conducting logistics audits and relating them to a number of problem areas. Topics include: Problem Based Learning techniques; logistics audit methodologies; problem identification; problem resolution; report preparation directed towards the analytical aspects of logistics.

**Learning Outcomes** Structure a specific problem and analyse the current industry environment in which the problem exists. Use audit report methods as a basis to provide management with options and viable solutions for a range of issues such as: Transport; Storage; Material Handling; Inventory; Procurement. Apply Problem Based Learning techniques as the learning medium.


**Class Contact** Equivalent to three hours per week. Normally to be delivered as two hours of lectures and one hour of tutorials, workshops or modules or a delivery mode as approved by the Faculty of Business and Law. Unit of study equal to 12 credit points.

**Assessment** Minor assignment (1000 words), 20%; Major assignment (3000 words), 30%; Case studies (500 words), 5 x 10%.

---

**RCM3111 DATA COMMUNICATIONS & NETWORKS 2**

**Campus** Footscray Park

**Prerequisite(s)** RCM2112 Data Communications & Networks 1


**Required Reading** to be advised by lecturer


**Class Contact** Four hours contact per week for one semester comprising two one hour lectures and two one-hour laboratory/tutorial.

**Assessment** Final examination, 70%, assignments, 30%.

---

**RCM3112 USER INTERFACE DESIGN**

**Campus** Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)** RCM1114, RCM1115


**Class Contact** Three hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory/tutorial.

**Assessment** Final examination, 60%; assignment and tests, 40%.

---

**RCM3115 ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING**

**Campus** Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)** RCM2218, RCM2315

**Content** The client/server model. Comparison to mainframe environment; legacy system connections; mission critical services. Client and server roles. Network services; middleware and controlware; Two; three and n-tier architectures; integration layers; interfacing protocols and procedures. Client/server analysis modeling. Requirements determination; data models and object modeling; business process concepts and models. Data Base and user Interface Design. Database systems and services. Client and server architectures; linking multiple databases; GUI standards and design recommendations. Client/server development environments. Object building blocks; prototyping services; rapid application development; testing and validation. Extensions of the client/server model. Remote method invocation; CORBA; applications involving remote processing.
RCM3211 DATABASE SYSTEMS 3
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RCM2218 Database Systems 2.
Content Data warehouse, datamart, knowledge discovery in databases, data mining algorithms, online analytic processing (OLAP), online transaction processing (OLTP), hypercubes, star schemas, Multidimensional analysis, ROLAP and MOLAP.
Required Reading Nil.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; tests/assignments, 30%.

RCM3302 SELECTED TOPICS IN OPEN RES AND STATS

RCM3311 OBJECT ORIENTED PROGRAMMING 2
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RCM3132 Programming 2; RCM2311 Object Oriented Programming 1.
Content The subject explores advanced Java object-oriented programming techniques and their distributed characteristics in the Internet environment. Topics covered include JavaBeans, Security JDBC, Servlets, Java Server Pages (JSP), Remote Method Invocation (RMI).
Required Reading To be advised by lecturer.
Class Contact Four hours per week for one semester, comprising three one-hour lectures and one one-hour lab/tute.
Assessment Final examination, 80% assignments and tests, 20%.

RCM3312 INTELLIGENT SYSTEMS
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RCM3312 Programming 2 and RCM1114 Introduction to Computing and the Internet.
Content Introduction to intelligent systems and artificial intelligence, including a study of knowledge representation and problem solving strategies of rule-based expert systems, fuzzy logic, artificial neural networks and genetic algorithms. Practical work includes JESS expert system shell.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 80%; assignment(s), 20%.

RCM3313 SOFTWARE ENGINEERING 2
Campus Footscray Park, Malaysia, Hong Kong
Prerequisite(s) RCM2312, RCM2311
Content Topics include inspection and formal review, good programming practice, software testing, software estimation, project planning, software process improvement and capability maturity models.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 80%; assignment 20%. In order to pass, students must obtain at least 50% of the total marks given in this subject, including at least 40% of the examination mark and at least 40% of the internal marks.

RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RCM2311 Object Oriented Programming 1.
Content Review of object oriented design approaches; the Unified Modeling Language (UML); introduction to Rational Rose; the Unified Method; and Agile Modeling approach. design of domain layer; design of storage layer for the use of persistent objects; user interface design considerations; applying the patterns approach to analysis and design.
Class Contact Four hours per week for one semester comprising of two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; Assignment and test, 30%.

RCM3316 ADVANCED MATHEMATICAL TECHNIQUES
Campus Footscray Park
Prerequisite(s) RCM2321
Content A selection of one or more of the following topics: Asymptotic and perturbation techniques: Taylor's Theorem and 1'Hospital's Rule, Order Symbols, Asymptotic Expansions, Asymptotic series versus convergent series, introduction to perturbation theory, Taylor's method, perturbation and Asymptotic of Algebraic and Transcendental Equations, application to solution of differential equations, regular versus singular perturbation, application to expansion of integrals, Gamma function, transforms, integration by parts, Laplace method, method of stationery phase, method of steepest descent, developing Maple code to solve applicable problems. Advanced techniques for differential equations: methods for non-constant coefficient ordinary differential equations, analytic techniques to solve linear partial differential equations, heat equations, wave equation, Black-Schole option pricing formula, Navier Stokes equation including viscous and inviscid flow. Green's functions and reformation to integral form.
Computational techniques to include finite element method, Crank-Nicholson, elementary methods for integral equations and singular quadrature. Advanced computational techniques: Integration and quadrature including Newton-Cotes, weighted Newton-Cotes,adaptive schemes, Gaussian quadrature, Perno theorem and generation of error bounds for a variety of measures, application to Taylor theorem, integral transforms and integral equations of the first and second kind, multi-dimensional quadrature.
Required Reading Nil.
Class Contact 2 x one hr, 1x1hr tutorial, 1x1hrs Laboratory for one semester.
Assessment 15% Lab work, 15% mid-semester test (90 minutes), 70% end of semester examination (3 hours).

RCM3413 FINANCIAL MODELLING

RCM3511 IMAGE PROCESSING 2
Campus Footscray Park
Prerequisite(s) RCM2511 Image Processing, RCM1312 Programming 2
Content Image file types. Topology and geometry; applications to boundary detection, skeletonization and image resizing. Quantization and dithering. Advanced frequency domain filtering, including inverse filtering and Wiener filtering; the Fast Fourier Transform. Shape and size analysis: greyscale morphology and shape descriptors. Lossy compression and the JPEG standard. Wavelets and their applications. Implementation of image processing algorithms.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; assignment and tests, 30%.

RCM3611 REGRESSION ANALYSIS
Campus Footscray Park
Prerequisite(s) RCM2611
Content Review of linear model theory. The signs of, and solution to, common problems with the assumptions necessary for inference in the least squares regression method. Using Generalised Linear Models to overcome a number of these problems. Logistic regression and log linear models. Non-linear regression methods.
Required Reading Myers, R.H. ‘Classical and Modern Regression with Applications’ 2nd Ed, 1990, Duxbury.
Class Contact Four hours per week for one semester, mix of lectures, tutorials and computer laboratory.
Assessment Final Examination 60% Assignments 40%.

RCM3613 TIME SERIES ANALYSIS
Campus Footscray Park, Hong Kong, Malaysia, Singapore
Prerequisite(s) RCM2612 Forecasting or equivalent.
Required Reading To be advised by lecturer
Class Contact Four hours per week comprising two hours lecture and two hour laboratory.
Assessment Final examination, 50%; project, 50%.

RCM3615 MULTIVARIATE STATISTICS
Campus Footscray Park
Prerequisite(s) RCM2611 Linear Statistical Models, RCM1713 Discrete Mathematics.
Content Revision and extension of work previously covered on matrix algebra. Brief discussion of multivariate distributions with particular reference to the multivariate normal distribution and discussion of multivariate statistical tests. A selection of topics from, discriminant analysis, principal components, factor analysis, regression analysis.
Class Contact Four hours per week for one semester, comprising two hours of lectures and two hour of laboratory/tutorial.
Assessment Final examination, 80%; Test, 20%.

RCM3617 QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN
Campus Footscray Park
Prerequisite(s) RCM1614 Applied Statistics 2.
Required Reading To be advised by the lecturer.
Class Contact Four hour mix of lectures, tutorials, practice and laboratory classes.
Assessment Final examination, 80%; Mid-semester test, 20%.

RCM3711 COMPUTATIONAL METHODS
Campus Footscray Park
Prerequisite(s) RCM2712 or RMA2201 or RMA2801.
Content This subject is designed for students interested in applying knowledge of programming techniques to solving applied computational problems. Topics include approximation and interpolation, optimization and root finding, quadrature, spectral decomposition and methods for differential equations. A variety of practical applications will be considered, set in a high level programming environment.
Required Reading Nil
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 80%; assignment and tests, 20%.

RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY
Campus Footscray Park, Sydney, Malaysia
Prerequisite(s) RCM1711 Mathematical Foundations 1 and RCM1712 Mathematical Foundations 2 or equivalent.
Required Reading To be advised by the lecturer.
Class Contact Four hours per week: two hours lecture, and two hour tutorial or laboratory.
Assessment Final examination, 80%; assignment and tests, 20%.

RCM3820 INTERNET COMPUTING USING XML
Campus Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia
Prerequisite(s) RCM1114
Content Introduction to XML: definition, benefits, etc.; XML tools; XML namespaces; Document Type Definitions; XML Schema; Extensible Stylesheet Language; XML Forms; XSL Formatting Objects; Resource Description Framework and Dublin Core.
Required Reading To be advised.
Class Contact Four hours/week: two hours of lectures and two hours of computer laboratory.
Assessment Two assignments, 30%; final examination, 70% (3 hours duration). In order to pass, students must obtain at least 50% of the total marks given in this subject.

RCM3911 SIMULATION
Campus Footscray Park, Hong Kong
Prerequisite(s) Pass in eight electives (advisory). Students should have successfully completed second year.
Content On completion of the subject, students should be able to: understand the philosophy and concepts of simulation; have a good knowledge and understanding of a modern simulation language including principles of modelling; design, justify, and implement computer-based models of the operation of manufacturing and business systems.
Required Reading SCM3911 Lecture Notes.
Class Contact Four hours per week for one semester, comprising two one-hour lectures and two one-hour laboratory/tutorial.
Assessment Final examination, 70%; assignment and tests, 30%.

RCM3940 COMPUTATIONAL RISK MODELLING
Campus Footscray Park
Prerequisite(s) RCM3131, RCM1711
RCM3950 INTERNET DATA MANAGEMENT

Campus Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia.

Prerequisite(s) RCM2313

Content Introduction to Class; Introduction to ASP.NET; Introduction to Visual Studio.NET; Using Server Controls; Using ASP.NET Rich Controls; Using Visual Basic.NET Within an ASP.NET Page; Managing Data Sources; Building Data-Driven ASP.NET Applications; Building Data-Driven Web Applications; Configuring an ASP.NET Application; Troubleshooting and Deploying an ASP.NET Application.

Required Reading

Introduction to ASP.NET, Kathleen Kalata, © 2002 Course Technology, 0-619-06321-1.

Recommended Reading


Class Contact

Four hours per week for one semester, comprising one two-hour lecture and two one-hour laboratory/tutorial.

Assessment

Laboratory, 15%; Assignments, 35%; Mid-Semester Test (1 hour duration), 25%; final test (1 hour duration). In order to pass, students must obtain at least 25% of Labs and Assignment, and 25% of Tests in this subject.

RCM3960 INTERNET SECURITY

Campus Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia.

Prerequisite(s) RCM1711 and RCM1712 or equivalent.

Content


Required Reading

Supplied notes.

Recommended Reading


Class Contact

Four hours/week: two lectures and two computer laboratory, one tutorial.

Assessment

Mid semester tests, 15% each (1 hour duration); one final exam, 70% (3 hours duration). In order to pass, students must obtain at least 50% of the total marks given in this subject.

RCM3970 COMPUTER GRAPHICS FOR GAME PROGRAMMING

Campus Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia, China.

Prerequisite(s) RCM1713 or equivalent. RCM2213

Content

The graphics pipeline and graphics performance: texture mapping; description of surface and curve; advanced topics on hidden surface removal; using and manipulating scene graphs; design of interactive applications; collision detection; geometric level of detail; special effects such as shadows, billboarding and motion blur; and hardware procedural shading.

Required Reading

Lecture notes provided by lecturer.

Recommended Reading


Class Contact

Four hours per week for one semester, comprising one two-hour lecture and one two-hour tutorial and computer laboratory.

Assessment

Normally two assignments, 30%; final examination, 70%.

RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS

Campus Footscray Park, Sydney, Hong Kong, Malaysia.

Prerequisite(s) RCM1614 or equivalent.

Content


Required Reading

Recommended Reading


Class Contact

Three hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory.

Assessment

Project, 40%; Examination, 60%.

RCM5602 QUALITY MANAGEMENT AND STATISTICS

Campus Footscray Park, Sydney (Alpha Beta College), Hong Kong, Malaysia.

Prerequisite(s) RCM1614 or equivalent.

Content

Two undergraduate statistics subjects.

Required Reading

Supplied notes.

Recommended Reading


Required Reading

To be advised by lecturer.

Class Contact

Three hour mix of lectures, tutorials, practice and laboratory classes.

Assessment

Final examination, 80%; Mid-semester tests, 20%.

RCM5800 OBJECT ORIENTED PROGRAMMING GD1

Campus Footscray Park, Hong Kong

Prerequisite(s) Nil.

Content

Programming language; basic object oriented concepts; programming, algorithm development and elementary data structures objects and classes.

Required Reading

To be advised by lecturer.

Class Contact

Three hours per week for one semester comprising two hours of lectures and one one-hour practical.
RCM5801 INTRODUCTION TO COMPUTER SCIENCE

RCM5802 INFORMATION SYSTEMS
Campus Footscray Park, Hong Kong.
Prerequisite(s) Nil.
Content Database concepts and design methodology; hierarchical, network and relational models; relational approach and relational calculus; object-oriented approach to database design; conceptual models and query interfaces; database management and administration functions, shared access control, security, recovery and query interfaces; study and use of fourth generation languages for query, update and report generation.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising two hours of lectures and one one-hour practical.
Assessment Will be based on a combination of examination, assignments, and presentations according to a formula to be provided during the first week of classes.

RCM5803 DATA STRUCTURES AND PROGRAMMING
Campus Footscray Park
Prerequisite(s) RCM5800 Object Oriented Programming GD1
Content Program development and testing using Software Engineering principles; object oriented programming languages; organisation and manipulation of data; the software environment; object oriented design and analysis. Abstract data types.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising one one-hour lecture and one two-hour practical.
Assessment Will be based on a combination of examination, assignments, and presentations according to a formula to be provided during the first week of classes.

RCM5805 COMMUNICATION AND NETWORKS
Campus Footscray Park, Hong Kong.
Prerequisite(s) Nil.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising two one-hour lectures and one one-hour laboratory work.
Assessment Will be based on a combination of examination, assignments, and presentations according to a formula to be provided during the first week of classes.

RCM5807 ADVANCED INFORMATION SYSTEMS
Campus Footscray Park, Hong Kong.
Prerequisite(s) RCM5802 Information Systems or equivalent.
Content Data analysis and modelling using the Enhanced Entity-Relationship model and normalisation. Constraints beyond the EER model, and advanced data modelling issues. Database transactions: concept, ACID properties, specification. Transaction processing commit and rollback, concurrency control, locking, scheduling, and recovery. Database application development using embedded SQL.
Recommended Reading To be advised by lecturer.
Class Contact Two hours lecture and one hour laboratory per week.
Assessment Final examination, 80%; test, 20%.

RCM5810 SOFTWARE DEVELOPMENT
Campus Footscray Park
Prerequisite(s) RCM5800
Co-requisites Nil.
Learning Outcomes On the completion of the subject, students should be able to
• distinguish between the design process and the implementation process
• appreciate the different demands for implementation of software when using different software development paradigms
• work in a team environment and understand the importance of personnel management
• appreciate the complexity of deliverable software products and develop an object-oriented three-tier real-world application.
Content Introduction to VB .NET • Microsoft .NET Framework
• VB control structures: Selection and iteration
• Array, Sub Procedures and Function Procedures
• Graphical User Interface Design and Programming
• Using VB .NET Supplied Class
• Writing Class Definitions and
• Object Oriented Programming in VB .NET
• Introduction to DBMS, SQL and ASP .NET
• Exception Handling
Class Contact Three hours per week for one semester, comprising two-hour lecture and one-hour laboratory/tutorial.
Assessment 20% Laboratory 30% Assignment. This is technology based assignment with a level of difficulty appropriate for 30% of the total mark in the subject. 25% Mid-Semester Test 25% Final Test
In order to pass, students must obtain at least 25% of the combined Laboratory and Assignment mark and 25% of Test mark in this subject.

RCM5811 OPERATING SYSTEMS

RCM5813 ARTIFICIAL INTELLIGENCE
Campus Footscray Park
Prerequisite(s) Nil.
Content LISP; knowledge representation – semantic nets, problem solving, search, frames; knowledge-based systems – rule-based systems; logic programming; developing an expert system.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising two hours of lectures and one one-hour practical.
Assessment Will be based on a combination of examination, assignments, and presentations according to a formula to be provided during the first week of classes.

RCM5814 COMPUTER GRAPHICS

RCM5820 NETWORK OPERATING SYSTEMS ADMINISTRATION
Campus Footscray Park
Prerequisite(s) RCM5805 Communication and Networks.
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory/tutorial.
Assessment Final examination, 50%; assignment and tests, 50%.

RCM5821 INTRODUCTION TO MULTIMEDIA SYSTEMS
Campus Footscray Park
Prerequisite(s) Nil.

Required Reading To be advised by the lecturer.


Class Contact Three hours per week for one semester, comprising one one-hour lectures and one two-hour laboratory/tutorial.

Assessment Final examination, 80%; assignments, 20%.

RCM5822 NETWORK MULTIMEDIA SYSTEMS
Campus Footscray Park
Prerequisite(s) RCM5821 Introduction to Multimedia Systems.


Class Contact Three hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory/tutorial.

Assessment Final examination, 80%; assignments, 20%.

RCM5824 OBJECT ORIENTED PROGRAMMING GD2
Campus Footscray Park, Hong Kong
Prerequisite(s) RCM5800 Object Oriented Programming GD1
Content This subject provides practice to object oriented programming and methodology using advanced features and the application programming interface of the Java programming language. A deeper discussion of classes and objects, encapsulation, polymorphism, inheritance, relationships among classes of objects and programming with related classes along with exception handling, multithreading, file I/O and building GUI components.

Required Reading To be advised by lecturer.

Class Contact Three hours per week for one semester comprising two hours of lectures and one hour of practical class.

Recommended Reading, Deitel, H.M., and Deitel, P.J., 2005, Java How to Program, 6th edn, Prentice-Hall.

Assessment Final examination, 75%; assignment and laboratory, 25%.

RCM5825 WEB PROGRAMMING

RCM5827 INTELLIGENT WEB SYSTEMS

RCM5902 OPTIMISATION TECHNIQUES

RCM6021 LOGISTICS SOLUTIONS AND SYSTEMS
Campus City Flinders, Liaoning-China, Sunway-Malaysia.

Prerequisite(s) Nil.

Content The unit of study aims to familiarise students with the process of resolving logistics related business problems through the process of conducting logistics audits and relating them to a number of problem areas. Topics include: Problem Based Learning techniques; logistics audit methodologies; problem identification; problem resolution; report preparation directed towards the analytical aspects of logistics.

Learning Outcomes Structure a specific problem and analyse the current industry environment in which the problem exists. Use audit report methods as a basis to provide management with options and viable solutions for a range of issues such as: Transport; Storage; Material Handling; Inventory; Procurement. Apply Problem Based Learning techniques as the learning medium.

Required Reading David Taylor, 1997, Global Cases in Logistics and Supply Chain Management, thomson Business Press.


Class Contact Equivalent to three hours per week. Normally to be delivered as two hours of lectures and one hour of tutorials, workshops or modules or a delivery mode as approved by the Faculty of Business and Law. Unit of study equal to 12 credit points.

Assessment Case study/Problem solutions: 5 cases x 10 = 50%; One major project assignment, 4000 word report and oral presentation: 50%.

RCM6102 THESIS (2 UNITS)

To be completed in one semester.

Campus Footscray Park

Prerequisite(s) Nil.

Co-requisite(s) Nil.

Content The aim of this subject is to enable students to adequately research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

Required Reading To be advised by the supervisor.

Class Contact No formal class contact, however, there will be regular meetings with the students’ supervisors.

RCM6103 THESIS (4 UNITS)

To be completed in one semester.

Campus Footscray Park

Prerequisite(s) Nil.

Co-requisite(s) Nil.

Content The aim of this subject is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

Required Reading To be advised by the supervisor.

Class Contact No formal class contact, however, there will be regular meetings with the students’ supervisors.

Assessment The thesis will normally be assessed by at least two examiners from an appropriate areas of expertise.

RCM6105 THESIS (1 UNIT) (PART-TIME) (FOR TWO SEMESTERS)

RCM6104 THESIS (1st semester code, thesis to be completed over two semesters)

Campus Footscray Park

Prerequisite(s) Nil.

Co-requisite(s) Nil.

Content The aim of this subject is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

Required Reading To be advised by the supervisor.

Class Contact No formal class contact, however, there will be regular meetings with the students’ supervisors.

RCM6106 THESIS (2nd semester code, thesis to be completed over two semesters)

Campus Footscray Park

Prerequisite(s) Nil.

Co-requisite(s) Nil.

Content The aim of this subject is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted
thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

**Required Reading**
To be advised by the supervisor.

**Class Contact**
No formal class contact, however, there will be regular meetings with the students’ supervisors.

**RCM6106 THEESIS (2 UNITS)**
2nd semester code, thesis to be completed over two semesters

**Campus**
Footscray Park, Hong Kong

**Prerequisite(s)**
Nil.

**Content**
The aim of this subject is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

**Required Reading**
To be advised by supervisor.

**Class Contact**
No formal class contact, however, there will be regular meetings with the students’ supervisors.

**Assessment**
The thesis will normally be assessed by at least two examiners from an appropriate areas of expertise.

**RCM6107 THEESIS (2 UNITS)**
(2nd semester code, thesis to be completed over two semesters)

**Campus**
Footscray Park

**Prerequisite(s)**
Nil.

**Co-requisites**
Nil.

**Content**
The aim of this subject is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, and it consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated, the investigation described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

**Required Reading**
To be advised by the supervisor.

**Class Contact**
No formal class contact, however, there will be regular meetings with the students’ supervisors.

**Assessment**
The thesis will normally be assessed by at least two examiners from an appropriate areas of expertise.

**RCM6501 IMAGE PROCESSING ALGORITHMS**
Campus
Footscray Park

**Prerequisite(s)**
Nil.

**Content**
An introductory subject which covers the fundamental algorithms used in image processing and pattern recognition. The topics include: point, algebraic and geometric operations; smoothing and edge detection, linear convolution, median and max/min filters, segmentation, Hough methods, morphological operations; image coding and compression; Introduction to pattern recognition algorithms. Artificial neural networks for pattern recognition, face recognition.

**Required Reading**
To be advised by lecturer.

**Class Contact**
Three hours per week for one semester comprising lectures/practicals/tutorials.

**Assessment**
Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes. Final examination, 70%; assignments and laboratory works, 30%.

**RCM6601 RELIABILITY AND MAINTENANCE (NOT OFFERED IN 2006)**

**RCM6606 TIME SERIES ANALYSIS**
Campus
Footscray Park

**Prerequisite(s)**
RCM6501 or equivalent.

**Content**

**Required Reading**
To be advised by lecturer.

**Recommended Reading**


**Class Contact**
Three hours per week comprising two hours lecture and one hour laboratory.

**Assessment**
Final examination, 50%; project, 50%.

**RCM6607 STATISTICAL COMPUTING**
Campus
Footscray Park

**Prerequisite(s)**
Nil.

**Content**

**Required Reading**
To be advised by lecturer.

**Class Contact**
Three hours per week for one semester comprising lecture and practical.

**Assessment**
Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes.

**RCM6608 MULTIVARIATE ANALYSIS**

**RCM6702 INTERNET DATA REPRESENTATION 1**
Campus
Footscray Park, Hong Kong, Malaysia

**Prerequisite(s)**
RCM6822 Internet Programming or equivalent subject.

**Content**
DRL data access and use; Metadata, such as Resource Description Framework; DRL tools; DRL definition and declaration, such as XML Schema; Parsers and validators; Presentation of DRL data; Research applications of the DRL.

**Required Reading**

**Recommended Reading**

- ASP.NET by Example, Steven A. Smith, © 2002 Course Technology, 0-619-06321-1.

**Class Contact**
Two hour lecture and one laboratory/tutorial per week.

**Assessment**
Final examination, 70%; Assignments, 30%.

**RCM6710 INTERNET DATA MANAGEMENT 1**
Campus
Footscray Park, Sydney, Hong Kong, Malaysia

**Prerequisite(s)**
RCM2313 or Internet Programming subject.

**Content**
Introduction to Class; Introduction to ASP.NET; Introduction to Visual Studio.NET; Using Server Controls; Using ASP.NET Rich Controls; Using Visual Basic.NET Within an ASP.NET Page; Managing Data Sources; Building Data-Driven ASP.NET Applications; Building Data-Driven Web Applications; Configuring an ASP.NET Application; Troubleshooting and Deploying an ASP.NET Application.

**Required Reading**
Introduction to ASP.NET, Kathleen Kalata, © 2002 Course Technology, 0-619-06321-1.

**Recommended Reading**

**Class Contact**
Three hours per week for one semester comprising one two-hour lecture and one one-hour laboratory/tutorial.

**Assessment**
15% Labs 35% Assignment 25% Mid-Semester Test 25% Final Test In order to pass, students must obtain at least 25% of Labs and Assignment, and 25% of Tests in this subject.

**RCM6812 CRYPTOGRAPHY COMPUTER & NETWORK SECURITY**
Campus
Footscray Park

**Prerequisites**
A year of tertiary mathematics

**Co-requisites**

- NETWORK SECURITY

**Recommended Reading**


**Class Contact**
Three hours per week for one semester, comprising one two-hour lecture and one one-hour laboratory/tutorial.

**Assessment**
15% Labs 35% Assignment 25% Mid-Semester Test 25% Final Test In order to pass, students must obtain at least 25% of Labs and Assignment, and 25% of Tests in this subject.

**RCM6818 CRYP TOGRAPHY COMPUTER & NETWORK SECURITY**
Campus
Footscray Park

**Prerequisites**
A year of tertiary mathematics

**Co-requisites**

- NETWORK SECURITY

**Recommended Reading**

RCM6814 ENTERPRISE - WIDE COMPUTING
Campus Footscray Park

Prerequisites RCM5800, RCM5802, RCM805, RCM822

Co-requisites

Learning Outcomes

Successful completion of this subject, student should be able to
1. develop electronic commerce applications with Internet and World Wide Web technology;
2. understand how to build secure electronic commerce with information security technology and payment systems;
3. make business trend prediction with data mining technology.

Content

Introduction to electronic commerce. Internet and World Wide Web technology.

Data warehouses and data mining technology.

Information security technology.

Electronic payment.

Required Reading


Recommended Reading


Class Contact 3 hours/week: lectures, tutorials, seminars and computer laboratory

Assessment

Examination (70%): 3 hours duration, closed book written paper. Teamwork assignment: case study of electronic commerce development for group working. This technology based assignment with a level of difficulty appropriate for 30% of the total mark in the subject.

RCM6815 THEORETICAL COMPUTER SCIENCE

RCM6819 USER INTERFACE DESIGN

Campus Hong Kong, Footscray Park

Prerequisite(s) RCM822 Internet Programming

Content


Required Reading


Recommended Reading


Class Contact 13 x three hour lectures/tutorials.

Assessment

Assignment, 40%; final examination, 60%.

RCM6820 DISTRIBUTED SYSTEMS

RCM6821 DECISION SUPPORT TECHNOLOGY

Campus Hong Kong, Footscray

Prerequisite(s) Nil

Content

Processes and phases of organisational decision making and modelling. Online analytic processing (OLAP) vs online transaction processing (OLTP). Decision support framework and applications. Data requirements and benefits of decision support systems. Structure, components and types of decision support systems. Data mining concepts. Data warehouse vs production systems. Warehouse data characteristics and requirements. Data fusion and data scrubbing. Data models for data warehouse and data mart. Star schemas and hypercubes. Multidimensional analysis ROLAP MOLAP and HOLAP. Data warehouse administration. Warehouse database management technology.

Recommended Reading

Immon WH, 2002, Building the Data Warehouse, 3rd edn, Wiley

Class Contact Three hours per week two hours lecture and one-hour laboratory/tutorial.

Assessment

Final examination 70%. Assignment/Test 30%.
RCM6822 INTERNET PROGRAMMING
Campus Footscray Park, Hong Kong
Prerequisite(s) Competency in Java
Required Reading Deitel, Deitel and Nieto, 2001 or later, Internet and World Wide Web: How to Program, Prentice Hall. D.R. Watson’s five hypertexts on Internet Programming, all available on the school’s intranet at s:\samples\scm6822/ Launcher.html or http://melba.vu.edu.au/~scm6822/
Class Contact Two hour lectures and one hour laboratory per week
Assessment Final Examination 58%, mid-semester practical test 30%, laboratory 12%.

RCM6823 DATABASE DESIGN, MANAGEMENT AND ADMINISTRATION
Campus Footscray Park, Hong Kong
Prerequisite(s) Good knowledge of relational databases; basic understanding of UNIX.
Class Contact Two hour lectures and one hour laboratory per week.
Assessment Final Examination, 70%; Assignment, 30%.

RCM6825 MULTIMEDIA SYSTEMS DESIGN AND DEVELOPMENT
Campus Footscray Park
Prerequisite(s) Introduction to Multimedia RCM5821
Content The aim of this subject is to develop a clear understanding of the processes and current methodologies used in the design and development of multimedia systems. The subject introduces some new 3D web graphics technologies related to multimedia system development, including java 3D and Virtual Reality Modeling Language (VRML).
Required Reading to be advised by the lecturer
Class Contact Three hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory.
Assessment Final Examination, 50%; Project, 50%.

RCM6827 RESEARCH PERSPECTIVES IN COMPUTER SCIENCE
Campus Footscray Park
Prerequisite(s) Enrolled Honours Student
Content Writing a research proposed, performing a literature review, writing a thesis, giving presentations, human research ethics, intellectual property.
Required Reading To be advised
Recommended Reading To be advised
Class Contact Four per week for one semester
Assessment A mix of written and oral presentations

RCM6830 KNOWLEDGE ENGINEERING AND E-COMMERCE TECHNOLOGY
Campus Footscray Park, Hong Kong
Prerequisite(s) Competency in a programming language.
Content This subject introduces students to concepts of knowledge and systems engineering with particular emphasis on electronic commerce systems. A study is made of the current and past technologies that have enabled the recent growth and establishment of electronic commerce. The supporting technologies needed for the three-tiered architecture of electronic commerce sites, i.e. front end and interfaces, middleware and backend servers together with their databases, are investigated in detail and form the basis of practical exercises.
Required Reading To be advised by lecturer.
Class Contact Two hour lecture and one hour laboratory/tutorial per week.
Assessment Final examination, 70%; assignment, 30%. Students must obtain at least 40% standard in the assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

RCM6841 SOFTWARE ENGINEERING 2
Campus Footscray Park, Hong Kong, Malaysia
Prerequisite(s) RCM6844 Software Engineering 1.
Content This subject reviews the software engineering knowledge areas, analyse software process improvement methods and introduces new progresses of software engineering. Topics include capability maturity models, requirement management, project planning, project tracking and oversight, configuration management, quality assurance, and agent oriented software engineering.
Class Contact Two hours lecture and one hour laboratory/tutorial per week for one semester.
Assessment Final examination, 70%; assignment, 30%. Students must obtain at least 40% standard in the assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

RCM6842 ADVANCED TOPICS IN SOFTWARE ENGINEERING
Campus Footscray Park, Hong Kong, Malaysia, Singapore
Prerequisite(s) RCM6841 Software Engineering 2.
Content Analysis, discussion and implementation of issues from research papers in an area of Software Engineering. For instance, papers on Goal-based methods in Scenario-based Design. Topics include: Analysing Requirements, Prototyping, Usability Evaluation, etc.
Class Contact Two hour lecture and one hour laboratory per week.
Assessment Contributions to projects, laboratories and seminars, 50%; assignments, 50%.

RCM6843 SOFTWARE ENGINEERING PROJECT
Campus Footscray Park, Hong Kong, Malaysia
Prerequisite(s) RCM6841 Software Engineering 2
Content Each student will work on a project as a member of a software development team. Students will be required to present written reports and give oral presentations during the course of the project. Projects will focus on industrial and business applications and will incorporate areas such as user interface development, database management systems, networking, web based and general application development environments.
Recommended Reading Research articles in Software Engineering; Course notes and relevant textbooks.
Class Contact Three hours per week, primarily in the laboratory.
Assessment Performance in project oral presentations, 30%; Quality of submitted reports, 70%.
RCM6844 SOFTWARE ENGINEERING 1
Campus Footscray Park, Hong Kong, Malaysia.
Prerequisite(s) Nil.
Content This subject covers software engineering knowledge in areas of software management, software verification and validation. Review topics including software process and software life-cycle models, software process improvement, requirement, classical analysis and design, object oriented analysis and design. Detailed topics include inspection, review, software testing, software estimation, project planning, project personnel and organization.
Class Contact Two hours lecture and one hour laboratory/tutorial per week for one semester.
Assessment Final examination, 70%; assignment, 30%. Students must obtain at least 40% standard in the assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

RCM6845 OBJECT ORIENTED TECHNOLOGY
Campus Footscray Park, Hong Kong, Malaysia.
Prerequisite(s) Two semesters of Java programming.
Content JavaBeans Component Model – Overview, Inspeetion, Properties of Beans; Networking – InetAddress Class, URL Class, URLDecoder Class, URLConnection Class, Sockets, Server Sockets, Datagram Clients/Servers; Servlet overview and architecture, HttpServlet Class, HttpServletRequest Interface, HttpServletResponse Interfae, Handling HTTP get and post Requests, setting up the Apache Tomcat Server, deploying a web application, session tracking; JSP Overview, scripting components, standard actions, directive, custom tag libraries; EJB Overview, session beans, EJB transactions.
Class Contact Two hours lecture and one hour laboratory/tutorial per week for one semester.
Assessment Final examination, 70%; Practical/Assignment, 30%. Students must obtain at least 40% standard in the practicals and assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

RCM6846 OBJECT ORIENTED DESIGN
Campus Footscray Park, Hong Kong, Malaysia.
Prerequisite(s) RCM5824 Object Oriented Programming GD2 or equivalent.
Content Unified Modeling Language (UML); Introduction to Rational Rose; Unified Method and the design of the domain layer; Concepts of persistence and transactions in an OO context; Interaction layer design considerations; Introduction to an Object Oriented development environment and OODBMS (JADE); Implementation and deployment models; Packages, subsystems and models; Design patterns and frameworks.
Class Contact Two hours lecture and one hour laboratory/tutorial per week for one semester.
Assessment Final examination, 70%; assignment, 30%. Students must obtain at least 40% standard in the assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

RCM6902 MATHEMATICAL PROGRAMMING 1
Campus Footscray Park.
Prerequisite(s) Consent of lecturer.
Content Overview of mathematical programming; review of linear constraints, convexity; the primal and dual problems; the simplex method, slack variables, optimality, post-optimality and sensitivity analysis, integer (linear) programs; commercial packages for mathematical programming, Applied LP Models.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising lectures/tutorials.
Assessment Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes.

RCM6904 SIMULATION
Campus Footscray Park.
Prerequisite(s) Nil.
Content Problem formulation using the concepts of entities, attributes, files, events etc. Generating random numbers from discrete and continuous distributions. Practical coding experience using SLAMII including debugging and verifying that the translated model executes as intended. Systems approach, flow diagram and problem analysis for discrete event systems. Network modelling involving queuing, resources, pre-emption, priorities and machine breakdown. Design and analysis of simulation experiments. Practical coding experience using SLAMII.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising lectures/tutorials.
Assessment Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes.

RCM6905 SEQUENCING AND SCHEDULING
Campus Footscray Park.
Prerequisite(s) Nil.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising lectures and tutorials.
Assessment Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes.

RCM6906 OPTIMISATION TECHNIQUES
Campus Footscray Park.
Prerequisite(s) Consent of lecturer.
Content Lecture Program Topics: Decision Tree and AHP; Maximal flow problems, Shortest-route problem, Minimal spanning tree problem, Estimating network flows; Queuing. Theory; Combinatorial Models: CSP, SCP, & BPP. Spreadsheet Analysis.
Required Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising lectures/tutorials.
Assessment Will be based on a combination of examination, assignments, tests and presentations according to a formula to be provided during the first week of classes.

RCM8801 RESEARCH THESIS 1 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficerforPostgraduateResearch/Policy ProcessesandGuidelines/
RCM8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Faculty website at the following link:

RCM8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Faculty website at the following link:

RCM8012 RESEARCH THESIS 2 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the website at the following link:
http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Faculty website at the following link:

RMA1001 ENGINEERING MATHEMATICS 1A
Campus Footscray Park, Werribee
Prerequisite(s) Year 12 mathematics or its equivalent
Content Basic algebra, including index, log laws, indicial and log equations, algebraic expansions; Functions, straight line, parabola, circle etc. Mod function, Domain, range, inverse functions; Trig Functions and their graphs, period amplitude, degrees radians. Basic trig identities, Inverse Trig functions. Converting aCosx+bSinx to single Sin, Cosine terms; Limits, continuity, differentiation, rules, higher derivatives, Implicit differentiation. Tangents and Normals; Parametric differentiation, derivatives of logs and exponentials. Rates of change, maximum and minimum problems. Trig and inverse trig derivatives, logarithmic differentiation; Introduction to integration. Fundamental theorem of Integral Calculus. Substitution rule. Areas, Mean values, Root mean square; Methods of integration, partial fractions, simple integration by parts; Introduction to differential equations, separation of variables, population growth, air resistance; Complex numbers. Vectors
Class Contact 60 hours of lectures/tutorials per semester.
Assessment There will be class tests, worth 30% and an end of semester examination worth 70%. No word length limit applies.

RMA1002 ENGINEERING MATHEMATICS 1B
Campus Footscray Park
Prerequisite(s) A pass in RMA1001 Engineering Mathematics 1A.


RMA1101 INTRODUCTORY MATHEMATICS
Campus Footscray Park
Prerequisite(s) Nil
Required Reading To be advised by lecturer.
Class Contact Four hours per week for two semesters based on two hour lectures and two hour tutorial sessions.
Assessment Tests and assignments, 40%; one three-hour examination at the end of each semester, 60%. A satisfactory level of assessment for each component is required for a subject pass.

RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1
Campus Werribee, St. Albans
Prerequisite(s) One of the Year 12 mathematics subjects
Content Revision of basic algebra and logarithms. Discussion of units, accuracy, precision and significant figures in experimental work. An introduction to matrices and matrix manipulation. Functions and graphs. Solutions of polynomial equations and the general concept of an equation and its solution. Introduction to the methods and applications of differential calculus – local and global max/min. Fitting functions to points and the method of least squares.
Recommended Reading Some web based references provided during presentation of the subject.
Class Contact Four hours per week for one semester consisting of one, one hour lecture and three hours of practice classes.
Assessment Test 1 (week 3), 15%; Test 2 (week 10), 25%; Final Examination, 60%.

RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2
Campus Werribee, St. Albans
Prerequisite(s) One of the Year 12 mathematics subjects
Content Representing data graphically and standard summary statistics. Elementary notions of probability and random variable.
The binomial and normal variables. Point and interval estimation and testing hypotheses on proportions, means and variances.


**Class Contact** Four hours per week for one semester consisting of one, one hour lecture, one, two hour tutorial and one, one hour computer laboratory.

**Assessment** Tutorial test (15%), computer test/assignment (15%) examination (70%).

**RMA2120 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2**

**Campus** Werribee

**Prerequisite(s)** RMA1110.


**Required Reading** To be advised.


**Class Contact** Four hours per week for one semester consisting of 1 hr lecture, 2 hrs tutorial and 1 hr tutorial/computer lab.

**Assessment** Tutorial test (15%), Computer test (15%), Examination (70%)

**RMA3071 INTRODUCTION TO COMPUTER UTILISATION**

**Campus** Werribee

**Prerequisite(s)** Nil

**Content** Web design, Hypertext Mark-up Language (HTML), C Program, Microsoft Excel.

**Required Reading** To be advised.


**Class Contact** Three hours per week for one semester, comprising one-hour lectures and two one-hour tutorial/lab.

**Assessment** Final examination: 70%; Assignment/test: 30%.

**RMA4001 ADVANCED MATHEMATICS FOR ELECTRICAL ENGINEERS**

**Campus** Footscray Park

**Prerequisite(s)** VEL2002 Linear Systems and Mathematics 2B.

**Content** A range of topics are to be selected from the following areas: (1) Numerical linear algebra, (2) Constraint and unconstraint optimization problems, (3) Iterative solutions of nonlinear algebraic equations and ordinary differential equations, (4) Mean square theory of random processes.


**Class Contact** 60 hours of lecture/tutorial per semester.

**Assessment** Mid-semester test 40% Examination 60%.
Below are details of courses offered by the School of Electrical Engineering in 2008. This information is also available online on the University's searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to International students are marked with the (I) symbol.

**BACHELOR OF ENGINEERING IN ELECTRICAL AND ELECTRONIC ENGINEERING (I)**

**Course Code:** EBEE

The Bachelor of Engineering in Electrical and Electronic Engineering is a flexible degree that allows students to specialise in a wide range of disciplinary areas such as Computer Engineering, Software Engineering, Microelectronic Systems, Telecommunications, Power Systems Engineering, Control Systems, Photonics, Robotics and Automation.

The first two years of the course develop the basic concepts in electrical and electronic engineering, computer systems and programming, together with related engineering sciences, mathematics, design projects and laboratory studies. Students have the opportunity to choose their field of specialisation in later years of the course.

**Course Objectives**

The main objectives of the course are to: provide an integrated foundation for electrical disciplinary studies and course specialisation into the particular areas of communication, computer, control, electronic and power engineering; develop attitudes of personal initiative and enquiry in students that may continue to further education and meet the technological changes in their profession; develop oral and written communications and an understanding of society and the engineer's role in society; provide for professional recognition by the Engineers Australia and other professional bodies.

**Course Structure**

Only the first year of our new PBL based course is shown in the following course structure. The later years are indicative of the existing (non PBL) course. These later years will be replaced as the PBL course is progressively introduced.

Engineering subject codes commence with "V".

Science subject codes commence with "R".

… A subjects = Semester1, … B subjects = Semester 2

**Year 1**

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEF1001 ENABLING SCIENCES 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEF1003 ELECTRICAL FUNDAMENTALS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB1001 PBL &amp; ENGINEERING PRACTICE 1A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEF1002 ENABLING SCIENCES 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEF1004 ELECTRICAL FUNDAMENTALS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB1002 PBL &amp; ENGINEERING PRACTICE 1B</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects total 2 x 48 Credit Points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Year 2**

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEF2001 LINEAR SYSTEMS AND MATHEMATICS 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEF2003 SYSTEMS &amp; APPLICATIONS 2C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB2001 PBL &amp; ENGINEERING PRACTICE 2A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEF2002 SYSTEMS AND MATHEMATICS 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEF2004 SYSTEMS &amp; APPLICATIONS 2D</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB2002 PBL &amp; ENGINEERING PRACTICE 2B</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects total 2 x 48 Credit Points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Stream Specialization Subjects A 12 60
* Stream Specialization Subjects B 12 60

- VED3001 ENGINEERING DESIGN & PROJECTS 3A
- VED3002 ENGINEERING DESIGN & PROJECTS 3B
- Elective (2 x 6 or 1 x 12 credit points) 12 60
- Elective (2 x 6 or 1 x 12 credit points) 12 60

* Stream Subjects: Stream subject A is a prerequisite for B.

Students to complete 6 stream subjects (in Sem5-8), selecting a minimum of two stream A and two stream B subjects.

**Year 4**

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEG4004 VEG4002 PROFESSIONAL ENGINEERING PRACTICE 4B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

* Stream Specialization Subjects A 12 60
* Stream Specialization Subjects B 12 60

- VED4001 ENGINEERING DESIGN & PROJECTS 4A
- VED4002 ENGINEERING DESIGN & PROJECTS 4B
- Elective (2 x 6 or 1 x 12 credit points) 12 60
- Elective (2 x 6 or 1 x 12 credit points) 12 60

* Stream Subjects: Stream subject A is a prerequisite for B.

Students to complete 6 stream subjects (in Sem5-8), selecting a minimum of two stream A and two stream B subjects.

Minimum number of Subjects for Specialisation award other than Electrical and Electronic Engineering

Completion of:

- Stream A & Stream B Subject of the Specialisation;
- 18 Credit points of the Specialisation related Elective Subjects;
- Final Project in the field of the Specialisation.
### Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee (AU$) (AU$) (AU$)

<table>
<thead>
<tr>
<th>Stream Specialization or Elective Subjects (12 Credit pts)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>REP4100 DATA ACQUISITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>REP4200 DIRECTED STUDIES IN PHYSICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>REP4300 EINSTEIN’S THEORY OF RELATIVITY</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA3000 CONTROL SYSTEMS A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEA4000 COMPUTER CONTROLLED SYSTEMS B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEA4100 COMPUTER VISION AND APPLICATIONS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA4200 FUZZY CONTROL AND APPLICATIONS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA4300 OPTIMAL CONTROL SYSTEMS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA4400 ROBOTICS AND AUTOMATION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA4500 ROBUST CONTROL SYSTEMS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEA4600 SYSTEM IDENTIFICATION FOR CONTROL</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEE3000 ELECTRICAL MACHINES AND ENERGY SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEE4000 POWER ELECTRONICS AND DRIVES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEE4100 ELECTRIC ENERGY SYSTEMS ANALYSIS AND OPERATION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEE4200 ELECTRIC ENERGY SYSTEMS PROTECTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEE4300 ELECTRIC ENERGY TRANSMISSION AND DISTRIBUTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEE4400 HIGH VOLTAGE ENGINEERING</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>RMA4001 ADVANCED MATHEMATICS FOR ELECTRICAL ENGINEERS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEG4100 DIGITAL SIGNAL PROCESSING A</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEH3000 COMPUTER AND DIGITAL DESIGN A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEH4000 COMPUTER AND DIGITAL DESIGN B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEH4300 SYSTEMS ON A PROGRAMMABLE DEVICE</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEM3000 EDA TOOLS AND DESIGN METHODOLOGY A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEM4000 INTEGRATED CIRCUIT DESIGN B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEM4100 ANALOG AND MIXED SIGNAL DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEM4200 ASIC DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEM4300 EMBEDDED SYSTEMS DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEM4400 HIGH LEVEL SYNTHESIS – VERILOG</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEM4500 VLSI DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VEP3000 PHOTONICS A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VEP4000 PHOTONICS B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VES3000 DATA STRUCTURES AND ALGORITHM ANALYSIS A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VES4000 PROGRAMMING TOOLS AND Compilers B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VES4100 COMPUTER SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VES4200 NETWORK SOFTWARE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VES4300 SOFTWARE ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VET3000 TELECOMMUNICATION A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VET4000 TELECOMMUNICATION B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
</tr>
<tr>
<td>VET4100 COMPUTER COMMUNICATIONS 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4200 COMPUTER COMMUNICATIONS 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4300 DIGITAL COMMUNICATIONS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4400 DIGITAL SIGNAL PROCESSING IN TELECOMMUNICATIONS 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4500 SATELLITE COMMUNICATIONS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4600 WIRELESS COMMUNICATIONS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4700 COMMUNICATION SYSTEM AND NETWORK DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>VET4800 MULTIMEDIA AND IP-BASED NETWORKS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
</tbody>
</table>

Electives from outside School of Electrical Engineering  
(Subject to approval of Course Director) 12 60

Electives from outside School of Electrical Engineering  
(Subject to approval of Course Director) 6 30

### BACHELOR OF ENGINEERING SCIENCE IN ELECTRICAL AND ELECTRONIC ENGINEERING (I)

**Course Code:** EBES

**Course Objectives**

The Bachelor of Engineering Science in Electrical and Electronic Engineering is a flexible degree that allows students to specialise in a wide range of disciplinary areas such as Computer Engineering, Software Engineering, Microelectronic Systems, Telecommunications, Power Systems Engineering, Control Systems, Photonics, Robotics and Automation.

Course structure: First common year of electrical, electronic, computing, mathematics and physics studies designed to provide a foundation for students to select from a wide range of higher level subjects in later years of their course. Students will have the opportunity to complete a generic Electrical and Electronic Engineering Science course or specialize in any of the above titled streams. The course has a focus on practical applications and project work forms a significant component of the total program.

Student completing their studies at an appropriate standard and with appropriate subjects may be granted up to three years credit into the Bachelor of Engineering degree.

**Course Structure**

Only the first year of our new PBL based course is shown in the following course structure. The later years are indicative of the existing (non PBL) course. These later years will be replaced as the PBL course is progressively introduced.

Engineering subject codes commence with 'V'.

Science subject codes commence with 'R'.

... A subjects = Semester 1, ... B subjects = Semester 2
### Year 1

<table>
<thead>
<tr>
<th>Subjects total 2 x 48 Credit Points per semester</th>
</tr>
</thead>
</table>

#### Semester 1

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEF1001</td>
<td>ENABLING SCIENCES 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB1001</td>
<td>PBL &amp; ENGINEERING PRACTICE 1A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEF1003</td>
<td>ELECTRICAL FUNDAMENTALS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEF1002</td>
<td>ENABLING SCIENCES 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB1002</td>
<td>PBL &amp; ENGINEERING PRACTICE 1B</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEF1004</td>
<td>ELECTRICAL FUNDAMENTALS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### Year 2

<table>
<thead>
<tr>
<th>Subjects total 2 x 48 Credit Points per semester</th>
</tr>
</thead>
</table>

#### Semester 1

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1001</td>
<td>ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB2001</td>
<td>PBL &amp; ENGINEERING PRACTICE 2A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEF2003</td>
<td>SYSTEMS &amp; APPLICATIONS 2C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

#### Semester 2

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1002</td>
<td>ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEB2001</td>
<td>PBL &amp; ENGINEERING PRACTICE 2A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEF2004</td>
<td>SYSTEMS &amp; APPLICATIONS 2D</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### Year 3

<table>
<thead>
<tr>
<th>Stream Subject 12 Credit Points</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VED3001</td>
<td>ENGINEERING DESIGN &amp; PROJECTS 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VED3002</td>
<td>ENGINEERING DESIGN &amp; PROJECTS 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Or

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VED3102</td>
<td>ENGINEERING DESIGN AND PROJECTS 3C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEG4001</td>
<td>PROFESSIONAL ENGINEERING PRACTICE 4A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Electives (6 or 12 credit points)

Stream Subjects: Students to complete a minimum of three stream subjects.

### Other Course Specific Notes

*Electives are appropriate if students have completed 1st Year level maths (RMA1001 & RMA1002 or equivalent). Students admitted with a standard of mathematics less than VCE Mathematical Methods will take RMA1000 in semester 1 and then RMA1001/2 over semester 2/3.

**Electives are applicable to those having exemption(s) for VEF2003/4 and are subject to the approval of the Course Coordinator.

### BACHELOR OF ENGINEERING IN ROBOTIC ENGINEERING

**Course Code:** EBRE

**Course Objectives**

This course is envisaged to integrate existing relevant subjects and resources within the Faculty of Health, Engineering and Science to appeal to incoming high ENTER level students with mechanical, electronic and computer interests along with the essential background in mathematics and physics. The structure of the course is to provide a common core progression with the revised Mechanical Engineering degree course linked with specialist subjects in robotics. Student completing this course will find employment as specialist engineers in the mechanical and electronic engineering interface in industry and research.

**Admission Requirements**

To qualify for admission to the course an applicant must have successfully completed a course of study at year 12 level or equivalent.

In addition to satisfying the entry requirements for Australian resident students or demonstrating equivalence, overseas students must provide evidence of proficiency in the English language:

- IELTS – an overall band score of 6-7, subject to individual profile;
- TOEFL – a score of 550+, and a Test of Written English (TWE) score of 5+.

**Course Duration**

The course is offered over four years on a full-time basis or part-time equivalent.

**Course Structure**

Engineering subject codes commence with 'V'.

Science subject codes commence with 'R'.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>VEF1001</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>VEF1003</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>VEB1001</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>Semester 2</td>
<td>VEF1002</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>VEF1004</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Year 2</td>
<td>VEF2001</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>VEF2003</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td></td>
<td>VEB2001</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
</tbody>
</table>

---

**SCHOOL OF ELECTRICAL ENGINEERING**

117
The major role of professional engineers in the Australian workforce is to act as agents for change through the development of technically sound, economically viable and socially acceptable solution to complex and new technical problems. In this context, the microelectronics engineer today is faced with many challenges brought about by the rapid advances in computer, multimedia and telecommunication technology. The Master of Engineering course in Microelectronic Engineering addresses all aspects of this technology, from high level specification of microelectronic systems, through implementation alternatives, and the effective use of design tools, to realisation of integrated circuits. The course aims to produce engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics industry. An important feature of the course is the opportunity it provides for the students to design their own integrated circuits. The Chipskills program is a Victorian Government initiative that seeks to develop a range of professional and vocational training programs in areas relevant to the semiconductor industry. The project involves Victoria University, RMIT University, Industry and Victorian State Government. Development and delivery of this course is shared between each of the partner universities.

Other Course Specific Notes

Industrial Experience

Candidates applying for the award of a degree in robotic engineering must ensure that they have submitted for approval evidence of having undertaken a minimum of 12 weeks industrial experience relevant to the course to satisfy the Institution of Engineers, Australia, requirements.

Overseas Exchange Program

Victoria University has exchange agreements with universities in many countries, some of which are the U.S.A., Canada, Mexico, United Kingdom and many European and Asian countries. For those students who do wish to study abroad, there is the opportunity to experience living in a different culture and environment, and to develop self-responsibility and reliance skills. Many students achieve improved results in their remaining studies after returning home, having developed a clearer perception of their future career with a stronger determination to succeed.

Professional Recognition

The Institution of Engineers, Australia, recognises the degree as meeting all academic requirements for corporate membership as a chartered engineer. Completion of the degree plus 12 weeks approved experience will admit to Graduate Membership. Victoria University students are eligible for Student Membership.

GRADUATE DIPLOMA IN MICROELECTRONIC ENGINEERING

Course Code: EGMI

The major role of professional engineers in the Australian workforce is to act as agents for change through the development of technically sound, economically viable and socially acceptable solution to complex and new technical problems. In this context, the microelectronics engineer today is faced with many challenges brought about by the rapid advances in computer, multimedia and telecommunication technology. The Master of Engineering course in Microelectronic Engineering addresses all aspects of this technology, from high level specification of microelectronic systems, through implementation alternatives, and the effective use of design tools, to realisation of integrated circuits. The course aims to produce engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics industry. An important feature of the course is the opportunity it provides for the students to design their own integrated circuits. The Chipskills program is a Victorian Government initiative that seeks to develop a range of professional and vocational training programs in areas relevant to the semiconductor industry. The project involves Victoria University, RMIT University, Industry and Victorian State Government. Development and delivery of this course is shared between each of the partner universities.

Course Objectives

The general aims of the course are to provide graduates with:

(a) high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
(b) the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
(c) a level of professional development in confidence, judgement and experience such that the implementation of proposed solutions proceeds successfully.

The specific aims of the course are to:

(a) develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification;
(b) develop a basic understanding of the device physics, the fabrication process and the testing to the level needed by IC designers;
(c) develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology;
(d) develop research skills necessary to obtain specialist knowledge of issues pertinent to integrated circuit design;
(e) cultivate logical and lateral thinking that leads to creation and innovation in the pursuit of solutions to engineering problems.
Admission Requirements

Admission to the course normally requires a four year Bachelor of Engineering degree in Electronic Engineering or Computer Engineering or Communication/Telecommunication Engineering or a four-year Bachelor of Science (Honours) degree in an appropriate field, or an equivalent qualification.

Applicants with a three year Bachelor of Science degree (in appropriate field) or a Bachelor of Engineering degree in another field may also be considered for admission on the condition that they may be required to take additional (preliminary) subjects that will strengthen their knowledge and skills in digital systems, analog electronics and microprocessor systems.

Full fee paying international students must have qualifications which are equivalent to those listed above. In addition they must provide evidence of proficiency in the English language as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

A panel comprising of academics from each of the partner universities will carry out student selection into this course.

Course Duration

The duration of the course, in normal mode of delivery, is one year full-time or part-time equivalent.

Course Structure

The Master of Engineering course is structured to allow students to exit at different academic levels with either, Graduate Certificate, Graduate Diploma or Master of Engineering qualifications. The completion of the Graduate Certificate in Microelectronic Engineering requires successful completion of four units, Graduate Diploma in Microelectronic Engineering requires successful completion of either eight units or six units and minor project, and Master of Engineering in Microelectronic Engineering requires successful completion of either eight units and major project or ten units and minor project.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6003 EDA TOOLS AND DESIGN METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6008 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6009 RELIABILITY AND TESTABILITY IN IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6014 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6017 DIGITAL SYSTEM DESIGN WITH VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6018 ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6020 MINOR PROJECT</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEH6030 MAJOR PROJECT</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

Other Course Specific Notes All Special Electives for Chipskills program are to be approved by the Course Directors (RMIT & VU).

GRADUATE DIPLOMA IN SYSTEMS AND CONTROL ENGINEERING

Course Code: EGSY

Course Objectives

The objective of this group of courses is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of automation and control engineering.

Admission Requirements

Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering or an equivalent.

Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

Full fee paying international students must have qualifications which are equivalent to those listed above. In addition they must provide evidence of proficiency in the English language as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

Admission to the course normally requires a four year Bachelor of Engineering degree in Electrical Engineering or Computer Engineering or an equivalent.

The objective of this group of courses is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of automation and control engineering.

Course Objectives

The course is unit based and consists of two core subjects (each of one unit), a set of elective subjects (each of one unit), a minor project (of two units), and a major project (of four units). A unit is worth 12 credit points.

The eligibility for the Graduate Certificate requires the successful completion of the two core subjects and two elective subjects.

The eligibility for the Graduate Diploma requires the successful completion of either (a) the two subjects and six elective subjects, or (b) the two core subjects, four elective subjects, and a minor subject.

The eligibility for the Master of Engineering requires the successful completion of either (a) the two core subjects, eight elective subjects, and a minor project, or (b) the two core subjects, six elective subjects, and a major project.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6310 LINEAR SYSTEMS AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6320 OPTIMAL FILTERING AND PARAMETER ESTIMATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Elective Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6311 MODELLING AND COMPUTER CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6321 FUZZY AND NEUTRAL CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6331 ROBOTICS AND PROGRAMMED CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6341 MEASUREMENT TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6351 POWER SYSTEMS OPERATION AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
integrated foundation for electrical disciplinary studies and course specialisation into the area of Computer Systems Engineering; develop the course is the opportunity it provides for the students to design their own integrated circuits. The specific aims of the course are to: provide an advanced technical skills necessary to master state of the art microelectronic technology; develop research skills necessary to obtain specialist engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics industry. An important feature of the demands of Information Technology in the twenty first century. Course material is drawn from a variety of backgrounds and includes: Integrated Circuit Design Methodologies, Digital and Analog Circuit Design, and Computer System Design and Implementation. The course aims to produce of computer and microelectronic systems, through implementation alternatives, to realisation of chips and also introduces students to the anticipated. The Master of Engineering Science course in Computer Systems Engineering addresses all aspects of this technology. From high level specification solutions to engineering problems. The objective of the course is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of telecommunication engineering. Admission Requirements. The eligibility for the Graduate Diploma requires the successful completion of 8 units comprising either (a) the two core units of study and six elective units of study, or (b) the two core units of study, four elective units of study, and a minor unit. The minor project may be substituted with the two project units. The course is unit based and consists of two core units of study, a set of elective units of study, and a minor project (of two units). A unit is worth 12 credit points. Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering, or an equivalent. Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+. Course Duration. The duration of the course, in normal mode of delivery, is one year for full-time students and a part-time equivalent for part-time students. Course Structure. The course is unit based and consists of two core units of study, a set of elective units of study, and a minor project (of two units). A unit is worth 12 credit points. The eligibility for the Graduate Diploma requires the successful completion of 8 units comprising either (a) the two core units of study and six elective units of study, or (b) the two core units of study, four elective units of study, and a minor unit. The minor project may be substituted with the two project units. Core Units of Study Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee Pre 2005 From 2005 Full Fee AUS AUS AUS AUS AUS AUS AUS AUS AUS Core Units of Study VET6510 COMMUNICATION THEORY 12 0.1250 2 $726 $908 $1,584 VET6520 DIGITAL COMMUNICATION PRINCIPLES 12 0.1250 2 $726 $908 $1,584 Elective Units of Study VET6511 DATA NETWORK ANALYSIS AND DESIGN 12 0.1250 2 $726 $908 $1,584 VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS 12 0.1250 2 $726 $908 $1,584 VET6531 WIRELESS COMMUNICATION SUBSYSTEMS 12 0.1250 2 $726 $908 $1,584 VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY 12 0.1250 2 $726 $908 $1,584 VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN 12 0.1250 2 $726 $908 $1,584 VET6561 LOCAL AREA AND BROADBAND NETWORKS 12 0.1250 2 $726 $908 $1,584 VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT 12 0.1250 2 $726 $908 $1,584 VET6522 TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING 12 0.1250 2 $726 $908 $1,584 VET6532 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS 12 0.1250 2 $726 $908 $1,584 VET6542 MOBILE AND PERSONAL COMMUNICATION SYSTEMS 12 0.1250 2 $726 $908 $1,584 VET6552 COMPUTER NETWORKS AND NETWORKING SOFTWARE 12 0.1250 2 $726 $908 $1,584 VET6562 DIGITAL SIGNAL PROCESSING 12 0.1250 2 $726 $908 $1,584 Project Units of Study VET6501 COMMUNICATION SYSTEM MODELING AND SIMULATION 12 0.1250 2 $726 $908 $1,584 VET6502 COMMUNICATION SYSTEM MODELING AND SIMULATION 2 Project 12 0.1250 2 $726 $908 $1,584 VET6550 MINOR PROJECT 24 0.2500 2 $1,452 $1,815 $3,168 Assessment. Assessment will be based on a combination of written assignments, laboratory exercises, project work, and formal examinations. Supplementary assessments are not normally available.
MASTER OF ENGINEERING IN ELECTRICAL AND ELECTRONIC ENGINEERING (I)

Course Code: EMEE

The Master of Engineering in Electrical and Electronic Engineering (Coursework) was introduced in 1988 and was revised in 2004. The course is application oriented and is intended for those who aspire to senior technical positions in various specialised areas of Electrical and Electronic Engineering.

Course Objectives

The objective of the course is to provide opportunity for practising electrical and electronic engineers to:

- broaden their technological base from their first degree to a chosen area of specialisation;
- obtain an in-depth understanding of the relevant theoretical principles involved in the chosen area of specialisation;
- develop skills necessary to carry out independent research and development work related to the chosen areas of specialisation;
- acquire expertise and keep abreast with the latest developments in the chosen area of specialisation.

Admission Requirements

Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering, or an equivalent.

Full-fee paying international students are required to have qualifications equivalent to those above, and in addition, they must provide evidence of proficiency in English Language, as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

Course Duration

The duration of the course, in normal mode of delivery, is two years for full-time students and a part-time equivalent for part-time students.

Course Structure

The course is unit based and consists of research projects (2 units), a core unit and elective subjects. The completion of the course requires successful completion of two units of research project, the core unit and at least five units of elective subjects of which at least three must be from Computer and Microelectronics Engineering disciplines.
### VEA6322 Process Instrumentation and Control
- **Credit Point:** 12
- **EFTSL:** 0.1250
- **SC Band:** 2
- **Pre 2005 (AU$):** $726
- **From 2005 (AU$):** $908
- **Full Fee (AU$):** $1,584

#### Elective Units of Study
- **VEA6331 Robotics and Programmed Control**
- **VEA6332 Electronic Control of Motors**
- **VEA6341 Measurement Technology**
- **VEA6342 Power Distribution Systems**
- **VEA6351 Power Systems Operation and Control**
- **VEA6352 Digital Simulation of Protection Systems**

### Computer Engineering Specialisation
#### Core Units of Study
- **VEC6111 Computer Technology**
- **VEC6112 Advanced Microprocessors**
- **VEC6121 Object Oriented Software**
- **VEC6122 Operating Systems and Multiprocessing**

#### Elective Units of Study
- **VEC6131 Computer Interconnection Hardware**
- **VEC6132 Digital System Modelling and Simulation**
- **VEC6141 Software Engineering**
- **VEC6142 Managing Software Projects**
- **VEC6151 Database and Query Systems**
- **VEH6152 Microprocessor Design Techniques**
- **VEH6152 Applied Knowledge Systems**

### Microelectronic Engineering Specialisation
#### Core Units of Study
- **VEH6001 HDL and High Level Synthesis**
- **VEH6002 IC Design**
- **VEH6003 EDA Tools and Design Methodology**
- **VEH6004 Digital System Design**

#### Elective Units of Study
- **VEH6007 Advanced VLSI Design**
- **VEH6008 VLSI Digital Signal Processing Systems**
- **VEH6009 Reliability and Testability in IC Design**
- **VEH6014 RF and Mixed Signal Design**
- **VEH6016 Verilog HDL**
- **VEH6017 Digital System Design with Verilog HDL**
- **VEH6018 Analog & Mixed Signal Design**

### Photonic Engineering Specialisation
#### Core Units of Study
- **VPP6511 Fibre Optic Communication Systems**
- **VPP6512 Advanced Fibre Optics**
- **VPP6521 Optics and Lasers**
- **VPP6522 Digital Communications over Optical Networks**

#### Elective Units of Study
- **VPP6531 Quantum Optics**
- **VPP6532 Optical Fibre Sensors**
- **VPP6541 Optical Materials**
- **VPP6542 Data Acquisition**

### Telecommunication Engineering Specialisation
#### Core Units of Study
- **VET6501 Communication System Modeling and Simulation 1**
- **VET6502 Communication System Modeling and Simulation 2**
- **VET6510 Communication Theory**
- **VET6520 Digital Communication Principles**

#### Elective Units of Study
- **VET6511 Data Network Analysis and Design**
- **VET6512 Intelligent Networks and Network Management**
- **VET6521 Digital Switching and Signalling Systems**
- **VET6522 Telecommunication Tariff Structures and Teletraffic Engineering**
- **VET6531 Wireless Communication Subsystems**
- **VET6532 Microwave and Satellite Communication Systems**
- **VET6541 Multimedia and Internet Technology**
- **VET6542 Mobile and Personal Communication Systems**
- **VET6551 Microwave Electronic Circuit Design**
- **VET6552 Computer Networks and Networking Software**
- **VET6561 Local Area and Broadband Networks**
- **VET6562 Digital Signal Processing**

### Project Units
- **VEA6050 Research Project**
- **VEE6050 Project Management Program**

#### Assessment
- Assessment will be based on a combination of written assignments, laboratory and project works, and formal examinations and presentations.
- Supplementary assessments are not normally available.

**NOTE:** The School of Electrical Engineering reserves the right to decide which of the specialisation streams would run at any given time, without giving any prior notice. Prospective students are advised to contact the school before embarking on a particular specialisation.
MASTER OF ENGINEERING IN MICROELECTRONIC ENGINEERING/MASTER OF ENGINEERING SCIENCE IN COMPUTER AND MICROELECTRONIC ENGINEERING (FOR CONTINUING STUDENTS ONLY)

Course Code: EMMC

Double Degree
The major role of professional engineers in the Australian workforce is to act as agents for change through the development of technically sound, economically viable and socially acceptable solution to complex and new technical problems.

In this context, the microelectronics engineer and/or the computer systems engineer today is faced with many challenges brought about by the rapid advances in computer, multimedia and telecommunication technology. The double degree in Master of Engineering in Microelectronics Engineering & Master of Engineering Science in Computer and Microelectronic Engineering course addresses all aspects of this technology, from high level specification of microelectronic and computer systems, through implementation alternatives, and the effective use of design tools, to realisation of integrated circuits and advanced computer architectures. The course aims to produce engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics and the computer systems industry.

Course Objectives
The general aims of the course are to provide graduates with:
(a) high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
(b) the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
(c) a level of professional development in confidence, judgement and experience such that the implementation of proposed solutions proceeds successfully.

The specific aims of the course are to:
(a) develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification, and advanced computer systems architecture
(b) develop a basic understanding of the device physics, the fabrication process and the testing to the level needed by IC designers and computer systems engineers;
(c) develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology and computer system;
(d) develop research skills necessary to obtain specialist knowledge of issues pertinent to integrated circuit design and computer systems;
(e) cultivate logical and lateral thinking that leads to creation and innovation in the pursuit of solutions to engineering problems.

Admission Requirements
Admission to the course normally requires a four year Bachelor of Engineering degree in Electronic Engineering or Computer Engineering or Communication/Telecommunication Engineering or a four year Bachelor of Science (Honours) degree in an appropriate field, or an equivalent qualification.

Applicants with a three year Bachelor of Science degree (in appropriate field) or a Bachelor of Engineering degree in another field may also be considered for admission on the condition that they may be required to take additional (preliminary) subjects that will strengthen their knowledge and skills in digital systems, analog electronics and microprocessor systems.

Full fee paying international students must have qualifications which are equivalent to those listed above. In addition they must provide evidence of proficiency in the English language as assessed by:
• IELTS – an overall band score of 6.5, subject to individual profile; or
• TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

A panel comprising of academics from the university will carry out student selection into this course.

Course Duration
The duration of the double degree, in normal mode of delivery, is two years full-time or part-time equivalent.

Course Structure
The double degree in Master of Engineering in Microelectronics Engineering & Master of Engineering Science in Computer and Microelectronic Engineering course is structured to allow students to exit at five different academic levels with either, Graduate Certificate, Graduate Diploma, Master of Engineering Science (Computer & Microelectronic Engineering), Master of Engineering (Microelectronic Engineering) or Double Degree – Master of Engineering (Microelectronic Engineering)/Master of Engineering Science (Computer & Microelectronic Engineering) qualifications.

The completion of the Graduate Certificate in Microelectronic Engineering requires successful completion of four units. Graduate Diploma in Microelectronic Engineering requires successful completion of either four core units and four microelectronics electives or six units (of which at least four are microelectronics electives) and minor project. Master of Engineering Science (Computer & Microelectronic Engineering) requires successful completion of four core units and four computer systems electives. Master of Engineering (Microelectronic Engineering) requires successful completion of four core units and four computer systems electives, Master of Engineering (Microelectronic Engineering) requires successful completion of either four core units, six microelectronics electives and a minor project or four core units, four microelectronics electives and a major project. The Double Degree – Master of Engineering (Microelectronic Engineering)/Master of Engineering Science (Computer & Microelectronic Engineering) requires successful completion of either four core units, six microelectronics electives, four computer systems electives and a minor project or four core units, four microelectronics electives, four computer systems electives and a major project.

Semester 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEH6003</td>
<td>EDA TOOLS AND DESIGN METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

AND THREE Elective Units of Study from LIST A

Semester 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEH6102</td>
<td>CUSTOM IC DESIGN B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

AND THREE Elective Units of Study from LIST A

LIST A

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEH6121</td>
<td>BASIC IC DESIGN/DEVICES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6010</td>
<td>ASIC DESIGN TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6016</td>
<td>VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6151</td>
<td>VHDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6132</td>
<td>INTEGRATED CIRCUIT TESTABILITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

LIST B

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>Sc Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEH6111</td>
<td>DIGITAL CIRCUIT DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6122</td>
<td>CUSTOM IC DESIGN A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6017</td>
<td>DIGITAL SYSTEM DESIGN WITH VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6018</td>
<td>ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6152</td>
<td>MICROPROCESSOR DESIGN TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726 $908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

AND/OR

TWO Elective Units of Study from other Disciplines
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

MASTER OF ENGINEERING IN MICROELECTRONIC ENGINEERING (I)

Course Code: EMMI

The major role of professional engineers in the Australian workforce is to act as agents for change through the development of technically sound, economically viable and socially acceptable solutions to complex and new technical problems. In this context, the microelectronics engineer today is faced with many challenges brought about by the rapid advances in computer, multimedia and telecommunication technology. The Master of Engineering course in Microelectronic Engineering addresses all aspects of this technology, from high level specification of microelectronic systems, through implementation alternatives, and the effective use of design tools, to realisation of integrated circuits. The course aims to produce engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics industry. An important feature of the course is the opportunity it provides for the students to design their own integrated circuits. The Chipskills program is a Victorian Government initiative that seeks to develop a range of professional and vocational training programs in areas relevant to the semiconductor industry. The project involves Victoria University, RMIT University, Industry and Victorian State Government. Development and delivery of this course is shared between each of the partner universities.

Course Objectives

The general aims of the course are to provide graduates with:

(a) high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
(b) the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
(c) a level of professional development in confidence, judgement and experience such that the implementation of proposed solutions proceeds successfully.

The specific aims of the course are to:

(a) develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification;
(b) develop a basic understanding of the device physics, the fabrication process and the testing to the level needed by IC designers;
(c) develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology;
(d) develop research skills necessary to obtain specialist knowledge of issues pertinent to integrated circuit design;
(e) cultivate logical and lateral thinking that leads to creation and innovation in the pursuit of solutions to engineering problems.

Admission Requirements

Admission to the course normally requires a four year Bachelor of Engineering degree in Electronic Engineering or Computer Engineering or Communication/Telecommunication Engineering or a four-year Bachelor of Science (Honours) degree in an appropriate field, or an equivalent qualification.

Applicants with a three year Bachelor of Science degree (in appropriate field) or a Bachelor of Engineering degree in another field may also be considered for admission on the condition that they may be required to take additional (preliminary) subjects that will strengthen their knowledge and skills in digital systems, analog electronics and microprocessor systems.

Full fee paying international students must have qualifications which are equivalent to those listed above. In addition they must provide evidence of proficiency in the English language as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

A panel comprising of academics from each of the partner universities will carry out student selection into this course.

Course Duration

The duration of the course, in normal mode of delivery, is one and a half years full-time or part-time equivalent for Masters course.

Course Structure

The Master of Engineering course is structured to allow students to exit at different academic levels with either, Graduate Certificate, Graduate Diploma or Master of Engineering qualifications. The completion of the Graduate Certificate in Microelectronic Engineering requires successful completion of four units, Graduate Diploma in Microelectronic Engineering requires successful completion of either eight units or six units and minor project, and Master of Engineering in Microelectronic Engineering requires successful completion of either eight units and major project or ten units and minor project.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From (AUS)</th>
<th>2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6003 EDA TOOLS AND DESIGN METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>AND FIVE of Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6008 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6009 RELIABILITY AND TESTABILITY IN IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6014 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6017 DIGITAL SYSTEM DESIGN WITH VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6018 ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VEH6020 MINOR PROJECT</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VEH6030 MAJOR PROJECT</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
</tbody>
</table>

Other Course Specific Notes

All Special Electives for Chipskills program are to be approved by the Course Directors (RMIT & VU).

MAster of Engineering in Systems and Control Engineering

Course Code: EMSY

Course Objectives

The objective of this group of courses is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of automation and control engineering.

Admission Requirements

Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering or an equivalent.
Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.

Course Duration
The duration of the course, in the normal mode of delivery, is one and half year for Master of Engineering, one year for Graduate Diploma, and a half year for Graduate Certificate.

Course Structure
The course is unit based and consists of two core subjects (each of one unit), a set of elective subjects (each of one unit), a minor project (of two units), and a major project (of four units). A unit is worth 12 credit points.

The eligibility for the Graduate Certificate requires the successful completion of the two core subjects and two elective subjects.

The eligibility for the Graduate Diploma requires the successful completion of either (a) the two subjects and six elective subjects, or (b) the two core subjects, four elective subjects, and a minor subject.

The eligibility for the Master of Engineering requires the successful completion of either (a) the two core subjects, eight elective subjects, and a minor project, or (b) the two core subjects, six elective subjects, and a major project.

Course Objectives
The objective of the course is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of telecommunication engineering.

Course Duration
The duration of the course, in normal mode of delivery, is a one year for full-time students and a part-time equivalent for part-time students. Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.

Course Structure
The course is unit based and the completion of the course requires the successful completion of eight (8) units consisting of two core units and six (6) other units (at Master level) of which at least four (4) must be from the Telecommunication Engineering discipline.

Core Units of Study

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET6501</td>
<td>COMMUNICATION SYSTEM MODELING AND SIMULATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6502</td>
<td>COMMUNICATION SYSTEM MODELING AND SIMULATION 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Elective Units of Study

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET6511</td>
<td>DATA NETWORK ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6521</td>
<td>DIGITAL SWITCHING AND SIGNALLING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6531</td>
<td>WIRELESS COMMUNICATION SUBSYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6541</td>
<td>MULTIMEDIA AND INTERNET TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6551</td>
<td>MICROWAVE ELECTRONIC CIRCUIT DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6561</td>
<td>LOCAL AREA AND BROADBAND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6512</td>
<td>INTELLIGENT NETWORKS AND NETWORK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6522</td>
<td>TELECOMMUNICATION TARIFF STRUCTURES AND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TELETRAFFIC ENGINEERING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6532</td>
<td>MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6542</td>
<td>MOBILE AND PERSONAL COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6552</td>
<td>COMPUTER NETWORKS AND NETWORKING SOFTWARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6562</td>
<td>DIGITAL SIGNAL PROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

MASTER OF ENGINEERING SCIENCE (TELECOMMUNICATION ENGINEERING) (I)

Course Code: EMTE

Course Objectives
The objective of the course is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of telecommunication engineering.

Course Duration
The duration of the course, in normal mode of delivery, is a one year for full-time students and a part-time equivalent for part-time students. Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.

Course Structure
The course is unit based and the completion of the course requires the successful completion of either (a) the two core subjects, eight elective subjects, and a minor subject, or (b) the two core subjects, six elective subjects, and a major project.

Core Units of Study

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET6501</td>
<td>COMMUNICATION SYSTEM MODELING AND SIMULATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6502</td>
<td>COMMUNICATION SYSTEM MODELING AND SIMULATION 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Elective Units of Study

<table>
<thead>
<tr>
<th>Code</th>
<th>Subject</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET6511</td>
<td>DATA NETWORK ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6521</td>
<td>DIGITAL SWITCHING AND SIGNALLING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6531</td>
<td>WIRELESS COMMUNICATION SUBSYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6541</td>
<td>MULTIMEDIA AND INTERNET TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6551</td>
<td>MICROWAVE ELECTRONIC CIRCUIT DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6561</td>
<td>LOCAL AREA AND BROADBAND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6512</td>
<td>INTELLIGENT NETWORKS AND NETWORK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6522</td>
<td>TELECOMMUNICATION TARIFF STRUCTURES AND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TELETRAFFIC ENGINEERING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6532</td>
<td>MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6542</td>
<td>MOBILE AND PERSONAL COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6552</td>
<td>COMPUTER NETWORKS AND NETWORKING SOFTWARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VET6562</td>
<td>DIGITAL SIGNAL PROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

MASTER OF ENGINEERING IN TELECOMMUNICATION ENGINEERING (I)

Course Code: EMTT

Course Objectives
The objective of the course is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of telecommunication engineering.

Admission Requirements
Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering, or an equivalent.

Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.

Course Duration
The duration of the course, in normal mode of delivery, is one and a half years for full-time students and a part-time equivalent for part-time students.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Course Structure
The course is unit based and consists of two core units of study, a set of elective units of study, a minor project (of two units), and a major project (of four units). A unit is worth 12 credit points.
The eligibility for the Master of Engineering requires the successful completion of 12 units, comprising either (a) the two core units of study, eight elective units of study, and a minor project, or (b) the two core units of study, six elective units of study, and a major project.
The minor project may be substituted with the two project units.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6510 COMMUNICATION THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6520 DIGITAL COMMUNICATION PRINCIPLES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6511 DATA NETWORK ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6521 COMPUTER NETWORKING AND SIGNALLING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6531 WIRELESS COMMUNICATION SUBSYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6561 LOCAL AREA AND BROADBAND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6522 TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6532 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6542 MOBILE AND PERSONAL COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6552 COMPUTER NETWORKS AND NETWORKING SOFTWARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6562 DIGITAL SIGNAL PROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Project Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6501 COMMUNICATION SYSTEM MODELING AND SIMULATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>VET6502 COMMUNICATION SYSTEM MODELING AND SIMULATION 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6500 RESEARCH PROJECT</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VET6550 MINOR PROJECT</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
</tbody>
</table>

Assessment
Assessment will be based on a combination of written assignments, laboratory exercises, project work, and formal examinations. Supplementary assessments are not normally available.

MASTERS (BY RESEARCH)
Course Code: ERIT, EROT

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8001 RESEARCH THESIS FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VMR8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VEE8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VQT8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VPP8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VPT8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>RPH8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8002 RESEARCH THESIS FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VMR8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VEE8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VQT8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VPP8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VPT8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>RPH8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>Year 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semesters 1 &amp; 2 Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8011 RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VMR8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VEE8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VQT8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VPP8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VPT8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>RPH8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semesters 1 &amp; 2 Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8012 RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VMR8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VEE8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VQT8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VPP8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VPT8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>RPH8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
</tbody>
</table>
GRADUATE CERTIFICATE IN MICROELECTRONIC ENGINEERING

Course Code: ETMI

The major role of professional engineers in the Australian workforce is to act as agents for change through the development of technically sound, economically viable and socially acceptable solution to complex and new technical problems. In this context, the microelectronics engineer today is faced with many challenges brought about by the rapid advances in computer, multimedia and telecommunication technology. The Master of Engineering course in Microelectronic Engineering addresses all aspects of this technology, from high level specification of microelectronic systems, through implementation alternatives, and the effective use of design tools, to realisation of integrated circuits. The course aims to produce engineers with the necessary skills and practical experience to satisfy the requirements of the microelectronics industry. An important feature of the course is the opportunity it provides for the students to design their own integrated circuits. The Chipskills program is a Victorian Government initiative that seeks to develop a range of professional and vocational training programs in areas relevant to the semiconductor industry. The project involves Victoria University, RMIT University, Industry and Victorian State Government.

Course Objectives

The general aims of the course are to provide graduates with:
(a) high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
(b) the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
(c) a level of professional development in confidence, judgement and experience such that the implementation of proposed solutions proceeds successfully.

The specific aims of the course are to:
(a) develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification;
(b) develop a basic understanding of the device physics, the fabrication process and the testing to the level needed by IC designers;
(c) develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology;
(d) develop research skills necessary to obtain specialist knowledge of issues pertinent to integrated circuit design;
(e) cultivate logical and lateral thinking that leads to creation and innovation in the pursuit of solutions to engineering problems.

Admission Requirements

Admission to the course normally requires a four year Bachelor of Engineering degree in electronic Engineering or Computer Engineering or Communication/Telecommunication Engineering or a four-year Bachelor of Science (Honours) degree in an appropriate field, or an equivalent qualification.

Applicants with a three year Bachelor of Science degree (in appropriate field) or a Bachelor of Engineering degree in another field may also be considered for admission on the condition that they may be required to take additional (preliminary) subjects that will strengthen their knowledge and skills in digital systems, analog electronics and microprocessor systems.

Full fee paying international students must have qualifications which are equivalent to those listed above. In addition they must provide evidence of proficiency in English Language, as assessed by:
• IELTS – an overall band score of 6.5, subject to individual profile; or
• TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

A panel comprising of academics from each of the partner universities will carry out student selection into this course.

Course Duration

The duration of the course, in normal mode of delivery, is one and a half years full-time or part-time equivalent for Masters course.

Course Structure

The Master of Engineering course is structured to allow students to exit at different academic levels with either, Graduate Certificate, Graduate Diploma or Master of Engineering qualifications. The completion of the Graduate Certificate in Microelectronic Engineering requires successful completion of four units, Graduate Diploma in Microelectronic Engineering requires successful completion of eight units or six units and minor project, and Master of Engineering in Microelectronic Engineering requires successful completion of either eight units and major project or ten units and minor project.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Core Units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
</tr>
<tr>
<td></td>
<td>VEH6002 IC DESIGN</td>
</tr>
<tr>
<td></td>
<td>VEH6003 EDA TOOLS AND DESIGN METHODOLOGY</td>
</tr>
<tr>
<td></td>
<td>One approved elective (12 credit points)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electives</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6008 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6009 RELIABILITY AND TESTABILITY IN IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6014 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6017 DIGITAL SYSTEM DESIGN WITH VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6018 ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6020 MINOR PROJECT</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEH6030 MAJOR PROJECT</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

Other Course Specific Notes *Note: All Special Electives for Chipskills program are to be approved by the Course Directors (RMIT & VU).

GRADUATE CERTIFICATE IN SYSTEMS AND CONTROL ENGINEERING

Course Code: ETSY

Course Objectives

The objective of this group of courses is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of automation and control engineering.

Admission Requirements

Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering or an equivalent. Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by; (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.
Course Duration
The duration of the course, in the normal mode of delivery, is one and half year for Master of Engineering, one year for Graduate Diploma, and a half year for Graduate Certificate.

Course Structure
The course is unit based and consists of two core subjects (each of one unit), a set of elective subjects (each of one unit), a minor project (of two units), and a major project (of four units). A unit is worth 12 credit points.

The eligibility for the Graduate Certificate requires the successful completion of the two core subjects and two elective subjects.

The eligibility for the Graduate Diploma requires the successful completion of either (a) the two subjects and six elective subjects, or (b) the two core subjects, four elective subjects, and a minor subject.

The eligibility for the Master of Engineering requires the successful completion of either (a) the two core subjects, eight elective subjects, and a minor project, or (b) the two core subjects, six elective subjects, and a major project.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6310 LINEAR SYSTEMS AND CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6320 OPTIMAL FILTERING AND PARAMETER ESTIMATION 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO of Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6331 MODELLING AND COMPUTER CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6332 FUZZY AND NEUTRAL CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6333 ROBOTICS AND PROGRAMMED CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6341 MEASUREMENT TECHNOLOGY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6351 POWER SYSTEMS OPERATION AND CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6312 MODEL BASED PROCESS CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6322 PROCESS INSTRUMENTATION AND CONTROL 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6332 ELECTRONIC CONTROL OF MOTORS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6342 POWER DISTRIBUTION SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6352 DIGITAL SIMULATION OF PROTECTION SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elective Subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6510 COMMUNICATION THEORY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6520 DIGITAL COMMUNICATION PRINCIPLES 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6511 DATA NETWORK ANALYSIS AND DESIGN 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6531 WIRELESS COMMUNICATION SUBSYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6561 LOCAL AREA AND BROADBAND NETWORKS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6562 DIGITAL SIGNAL PROCESSING 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6350 MINOR PROJECT 24 0.2500 2 $1,452 $1,815 $3,168</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6300 RESEARCH PROJECT 48 0.5000 2 $2,904 $3,630 $6,336</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GRADUATE CERTIFICATE IN TELECOMMUNICATION ENGINEERING
Course Code: ETTT

Course Objectives
The objective of the course is to provide opportunities for suitably qualified persons to acquire skills and expertise necessary to undertake research and development in the field of telecommunication engineering.

Admission Requirements
Admission to the course requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering, or an equivalent.

Full-fee paying international students are required to have qualifications equivalent to above, and in addition, they must provide evidence of proficiency in English Language, as assessed by: (a) International English Language Testing System – an overall band score of 6+ subject to individual profile, or, (b) Test of English as a Foreign Language – a score of 550+, and a Test of Written English score of 5+.

Course Duration
The duration of the course, in normal mode of delivery, is a half year for full-time students and a part-time equivalent for part-time students.

Course Structure
The course is unit based and consists of two core units of study, and a set of elective units of study. A unit is worth 12 credit points.

The eligibility for the Graduate Certificate requires the successful completion of 4 units, comprising the two core units of study and two elective units of study.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6510 COMMUNICATION THEORY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6520 DIGITAL COMMUNICATION PRINCIPLES 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6511 DATA NETWORK ANALYSIS AND DESIGN 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6531 WIRELESS COMMUNICATION SUBSYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6561 LOCAL AREA AND BROADBAND NETWORKS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6562 DIGITAL SIGNAL PROCESSING 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TELETRAFFIC ENGINEERING 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6532 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6542 MOBILE AND PERSONAL COMMUNICATION SYSTEMS 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6552 COMPUTER NETWORKS AND NETWORKING SOFTWARE 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VET6562 DIGITAL SIGNAL PROCESSING 12 0.1250 2 $726 $908 $1,584</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment
Assessment will be based on a combination of written assignments, laboratory exercises, project work, and formal examinations. Supplementary assessments are not normally available.
BACHELOR OF SCIENCE (HONOURS) – PHYSICS

Course Code: SHPC

Course Objectives
The course aims to broaden and deepen the student's knowledge and understanding of physics by the completion of advanced courses and to provide a basic training in the skills necessary to undertake research in physics. Research training will include the ability to devise, design and carry out research intended to yield data relevant to the solution of specific problems, the ability to develop and refine working hypotheses, to critically analyse data and to report results in an appropriate manner.

The research project is normally undertaken in one of the following areas of expertise of the section: optical fibre sensors, laser physics, optoelectronic imaging, applied optics and vacuum technology.

Admission Requirements
To qualify for entry to the Honours program the applicant should have completed the requirements for a pass degree with major studies in an appropriate discipline. Entry is at the discretion of the Applied Physics section and applicants should normally have obtained a 'credit' average in the final year of the pass degree. For mature age applicants, an appropriate combination of qualifications and experience will be considered.

Course Duration
The course will be offered on a full-time basis over one year or part-time equivalent.

Course Structure

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS$)</th>
<th>From 2005 (AUS$)</th>
<th>Full Fee (AUS$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPH4411 PHYSICS 4 (HONOURS) (48 per semester)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

Academic Progression
A student will not be allowed to repeat the Honours year or any component of it without the permission of the Course Co-ordinator.
SUBJECTS

Below are subject details for courses offered by the School of Electrical Engineering in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

REP1001 ENGINEERING PHYSICS 1A

Campus Footscray Park

Prerequisite(s) Nil

Content Physics of Units and Dimensions: Physical quantities, system of units and standards, dimension, unit conversion, significant figures. Mechanics: Scalars and vectors, displacement, velocity and acceleration, motion in one and two dimensions, force, Newton's laws of motion, friction, work and energy, conservation laws. Momentum and conservation laws, impulse and collisions, rotational motion, moments of inertia, centre of mass, torque, angular momentum, statics Wave Motion & Optics: SHM, damped harmonic motion, forced oscillations and resonance, oscillatory motion, mechanical and acoustic waves, superposition and standing waves, electromagnetic waves, reflection and refraction of light, mirrors and lenses, wave optics, thin films, polarization.

Fluids: Density, pressure, Pascal's law, equation of continuity, Bernoulli's equation.


Class Contact Students will be required to use the text book (required reading) extensively.

Assessment Class tests conducted throughout the semester (5 x 4% tests), 20%; Laboratory performance (5 x 4% laboratories during the semester), 20%; End of semester examination 60%.

REP1002 ENGINEERING PHYSICS 1B

Campus Footscray Park

Prerequisites EPP1001 Engineering Physics 1A or equivalent.

Students without formal academic qualifications in physics but with significant relevant experience may be considered for direct entry into this subject. 

Co-requisites Learning Outcomes Upon completion of this subject students will be able:

- to identify the key elements in a previously unseen problem associated with the content area of this subject to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical techniques to apply that information to the novel situation to reach a solution to the problem posed.

Content Thermodynamics: temperature, thermal expansion, heat conduction and insulation, heat capacity, specific and latent heat, ideal gases, work and heat in the thermal process, 1st law of thermodynamics, heat engines and the 2nd law of thermodynamics, thermal radiation. Quantum Physics Planck's hypothesis, photons and the photoelectric effect, photons and the Compton effect, pair production, wave – particle duality, wave nature of matter, Bohr model of the atom, Heisenberg uncertainty principle, quantum numbers.


Nuclear Physics: Properties of the nucleus, binding energy, radioactive decay, half-life, radioactive dating, fission and fusion (3 weeks)


Recommended Reading

Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory

Assessment Class tests conducted throughout the semester, 20%; Laboratory performance (5 x 4% laboratories during the semester), 20%; End of semester examination 60%.

REP1003 ENGINEERING PHYSICS 1C

Campus Footscray Park

Prerequisite(s) REP1001 Engineering Physics 1A or equivalent.

Students without formal academic qualifications in physics but with significant relevant experience may be considered for direct entry into this subject.

Content A selection of topics taken from the following:

- Thermodynamics: temperature, thermal expansion, heat conduction and insulation, heat capacity, specific and latent heat, ideal gases, work and heat in the thermal process, 1st law of thermodynamics, heat engines and the 2nd law of thermodynamics, thermal radiation.
- Electrical Devices: Fundamentals of electric circuits, series and parallel circuits, circuit analysis, DC and AC circuits, operation, performance characteristics and selection of motors and generators


Class Contact Students will be required to use the text book (required reading) extensively.

Assessment Class tests conducted throughout the semester (5 x 4% tests), 20%; Laboratory performance (5 x 4% laboratories during the semester), 20%; End of semester examination 60%.

REP4100 DATA ACQUISITION

Campus Footscray Park

Prerequisite(s) Completion of 1st year in an appropriate B.Eng., B.Eng.Sc., B.Sc. or B.App.Sc course.

Content Experimental data handling: measurements and errors. Types of errors, combining errors. Graphical analysis, statistical distributions. Sensors and transducers: Transducer types, e.g. resistive, voltage, current, capacitive, inductive. Transducer circuits such as bridges and operational amplifiers. Generalised measurement systems.


Graphical programming: Fundamentals of a graphical programming environment for the creation of a 'virtual instrument', e.g. LabVIEW. Project: Students will be assigned projects that will involve the automation of an experiment, both in terms of the hardware and software requirements.


Class Contact 48 hours per semester of lecture/tutorial/laboratory sessions.

Assessment 20% assignments submitted throughout the semester; 40% written examination; 40% project and report.

REP4200 DIRECTED STUDIES IN PHYSICS 2

Campus Footscray Park

Prerequisite(s) satisfactory completion of a first year physics sequence of at least two semester's duration.

Content A selection of topics from the following:

- Classical Mechanics; Thermodynamics*; Electromagnetism*; Optics*; Quantum Mechanics*; Nuclear Physics*; Relativity; High Energy Physics; Electrical and Electronic Machines.

* Advanced studies which extend the material covered in first year subjects.

Required Reading No text will be prescribed. Students will be expected to read widely around the topics in the subject.


Specialist Books: According to the topics chosen for each student or group of students with a similar background.

Class Contact 60 hours per semester of lecture/tutorial/seminar/laboratory sessions.
To gain experience in the conduct of a research project.

Content: Compulsory core units of quantum mechanics, statistical mechanics and research methods, plus elective units from the following areas: optical waveguides and sensors, relativity, surface physics, ion beam techniques, optics of materials, laser physics, lasers and optoelectronics, fibre optics, solid state physics, diffraction from crystals, nuclear physics. Other electives may be approved, including those offered at other universities. The Course Co-ordinator must approve all electives. Research Thesis: A research project will be undertaken in one of the Physics research areas, under the supervision of a member of academic staff. Subject to approval, research may be undertaken at a laboratory outside the University.


Class Contact: Average of 20 hours per week for one semester.

Assessment: The grade for RPH4411 shall be either “S” or “U”. An “S” grade will be awarded for satisfactory progression in both the coursework and research thesis components, for which the overall result for 2 semesters will be provided under RPH4412.

RPH8001 RESEARCH THESIS 1 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research_handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policies and Guidelines/

RPH8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research_handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policies and Guidelines/

RPH8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research_handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policies and Guidelines/
VEA3000 CONTROL SYSTEMS A
Campus Footscray Park
Prerequisite(s) Linear Systems and Mathematics 2B

Matlab and Programming: Introduction to the use of Matlab, Simulink and the Control System Toolbox. Experiments will include the use of a DSP system programmed in C.

Required Reading
Control Systems A Subject Notes, Victoria University.
Recommended Reading
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Mid-semester test 15%; Laboratory performance 10%; End of semester, open book examination 75%

VEA4000 COMPUTER CONTROLLED SYSTEMS B
Campus Footscray Park
Prerequisite(s) VEA3000 Control Systems A.


Design of simple discrete-time controllers in the frequency domain. Lag compensators, lead compensators, and lag-lead compensators.


Required Reading
Computer Controlled Systems Subject Notes, Victoria University.
Recommended Reading
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Laboratory assessment (including a small design project) 40%; End of semester, open book examination 60%.

VEA4100 COMPUTER VISION AND APPLICATIONS
Campus Footscray Park
Prerequisite(s) Completion of 2nd year.
Content Computer vision algorithms and applications. Topics include: image-processing, camera models and calibration, multiple camera vision, 2D and 3D geometric object recognition. Laboratory application exercises will be used to reinforce theoretical and practical aspects.

Required Reading
Recommended Reading
Class Contact 30 hrs of contact comprising 15 hrs of lectures/tutorials and 15hrs of Laboratory.
Assessment Examination 40%, Tests 10%, Laboratory Assignments 50%.

VEA4200 FUZZY CONTROL AND APPLICATIONS
Campus Footscray Park
Prerequisite(s) VEA3001 Introduction to Control Systems A, VEA3002 Introduction to Control Systems B.
Content Introduction to fuzzy sets theory: vagueness and uncertainty formalisation problem, fuzzy sets theory and probability theory comparison and discussion, fuzzy set definitions, properties of fuzzy sets, operations on fuzzy sets. Fuzzy relations: classical relations, fuzzy relations, operation on fuzzy relations, the extension principal. Natural language formalisation and approximate reasoning: linguistic variables, fuzzy propositions, fuzzy if–then statements, inference rules. Theoretical fundamentals of fuzzy control: the structure of a fuzzy controller, the rule base, the data base, the inference engine, choice of fuzzification and defuzzification procedures. Software and hardware tools for fuzzy control. Fuzzy controller design using software packages. Fuzzy controller implementation. Applications of fuzzy control.

Required Reading
Recommended Reading
Class Contact 30 hours per semester comprising 15 hours of lectures/tutorial and 15 hours of laboratory and project work.
Assessment Class tests/assignments throughout the semester 20%; Laboratory work 40%; Project work 40%

VEA4300 OPTIMAL CONTROL SYSTEMS
Campus Footscray Park
Prerequisite(s) VEA3001 Introduction to Control Systems A, VEA3002 Introduction to Control Systems B.

Required Reading
Optimal Control Systems Subject Notes, Victoria University.
Recommended Reading
Class Contact One and a half hours of lecture, one hour tutorial session per week for 12 weeks.
Assessment 2 assignments: 20% for each assignment; Examination: 60% (3 hours written examination, open book.)

VEA4400 ROBOTICS AND AUTOMATION
Campus Footscray Park
Prerequisite(s) RMA1002 Maths 1B, VEC1002 Computer Eng 1B.
Content Programmable Logic Controllers: Introduction to PLCs, programming and application. Overview of Robotics, classification, control methods, drive mechanisms. Programming and applications of specific robots. Homogenous transforms, configurations. Euler angles. Manipulator Kinematics. Introduction to KAREL, Robotic Vision: vision systems, introduction to image processing, edge detection algorithms, 2D recognition, stereo vision.

Required Reading
Handout Notes.
Recommended Reading
Class Contact 30 hrs of contact comprising 15 hrs of lectures/tutorials and 15hrs of Laboratory.
Assessment Examination 40%, Tests 10%, Laboratory Assignments 50%.
VEA4500 ROBUST CONTROL SYSTEMS
Campus Footscray Park
Prerequisite(s) VEA3001 Introduction to Control Systems A, VEA3002 Introduction to Control Systems B.
Required Reading Robust Control Systems Subject Notes, Victoria University.
Class Contact 30 hours per semester comprising 24 hours of lectures/tutorial and 6 hours of laboratory.
Assessment Laboratory assessment (including a small design project) 30%; End of semester, open book examination 70%.

VEA4600 SYSTEM IDENTIFICATION FOR CONTROL
Campus Footscray Park
Prerequisite(s) VEA3001 Introduction to Control Systems A, VEA3002 Introduction to Control Systems B.
Required Reading System Identification for Control Subject Notes, Victoria University.
Class Contact 30 hours per semester comprising 18 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Laboratory assessment 50%; End of semester, open book examination 50%.

VEA6311 MODELLING AND COMPUTER CONTROL
Campus Footscray Park
Prerequisite(s) VEA6310 or equivalent subjects.
Recommended Reading Johansson, R., Model Building and Identification, Prentice Hall, 1993.
Class Contact Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.
Assessment Tests, 20%; Examination, 80%. A pass in each component of assessment is required for a subject pass.

VEA6312 MODEL BASED PROCESS CONTROL
Campus Footscray Park
Prerequisite(s) VEA6310 or equivalent subjects.
Content Overview of model based control design. Model complexity and the model building process. Design of robust control systems by the internal model control method; performance and robustness trade-off. Difficulty in the realization of continuous-time Smith Predictors; the internal model control method; performance and robustness trade-off. Difficulty in the realization of continuous-time Smith Predictors; the internal model control method; performance and robustness trade-off. Difficulty in the realization of continuous-time Smith Predictors; the internal model control method; performance and robustness trade-off.
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.
Assessment Tests, 20%; Examination, 80%. A pass in each component of assessment is required for a subject pass.

VEA6320 OPTIMAL FILTERING AND PARAMETER ESTIMATION
Campus Footscray Park
Prerequisite(s) A knowledge of linear control systems covered in a standard B.Eng. course.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**Required Reading**

**Recommended Reading**

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
Two Class Tests (1 hr each) 20%; Final Examination (3 hrs) 80%. A pass in each component is necessary for a subject pass.

**VEA6321 FUZZY AND NEUTRAL CONTROL**

**Campus**
Footscray Park

**Prerequisite(s)**
Nil

**Co-requisite**
Nil

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
To be advised by lecturer.

**VEA6322 PROCESS INSTRUMENTATION AND CONTROL**

**Campus**
Footscray Park

**Prerequisite(s)**
Nil

**Content**

**Required Reading**
To be advised by the lecturer.

**Recommended Reading**
To be advised by the lecturer.

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
Laboratory exercises, 20%; Examination, 80%. A pass in each component of assessment is required for a subject pass.

**VEA6331 ROBOTICS AND PROGRAMMED CONTROL**

**Campus**
Footscray Park

**Prerequisite(s)**
Completed an undergraduate degree in Engineering or Science

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
Assignments and laboratory exercises: 60%; Examination: 40%. A pass in each component of assessment is required for a subject pass.

**VEA6332 ELECTRONIC CONTROL OF MOTORS**

**Campus**
Footscray Park

**Prerequisite(s)**
Nil

**Co-requisite**
Nil

**Content**

**Required Reading**
To be advised by the lecturer.

**Recommended Reading**

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
Tests/Assignments, 20%; Examination, 80%. A pass in each component of assessment is required for a subject pass.

**VEA6341 MEASUREMENT TECHNOLOGY**

**Campus**
Footscray Park

**Prerequisite(s)**
Nil

**Content**

**Required Reading**
To be advised by the lecturer.

**Recommended Reading**

**Class Contact**
Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.

**Assessment**
Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

**VEA6342 POWER DISTRIBUTION SYSTEMS**

**VEA6350 MINOR PROJECT**

**Campus**
Footscray Park, VEA6320

**Prerequisite(s)**
VEA6310, VEA6320

**Content**
Each student will undertake an individual research on a topic allocated to him or her under the supervision of an academic staff over the duration of a semester. Regular meetings will be held between the students and their supervisors in the form of seminars where students will report their progress in the form of formal presentations. In addition, informal meetings between students and their supervisors will take place as and when required. In the process, the student will be exposed to research related matters such as Research Methodology, Literature Reviews, Feasibility Studies, Experiment Design, Modelling and Simulation Techniques and Tools, Results Analysis and Validation, Report Documentation and Presentation.

**Required Reading**
To be advised by the supervisor of the project.

**Recommended Reading**
To be advised by the supervisor of the project.

**Class Contact**
Six hours per week for one semester, comprising three hours per week group seminar, and three hours per week (on average) individual meetings, discussions, etc. with respective supervisors.

**Assessment**
Regular seminar presentations (3 seminars, each of 20 min. duration) 30%; Final report (Approximately 12,000 words) 50%; Final presentation (of 30 min. duration) 20%.

**VEA6351 POWER SYSTEMS OPERATION AND CONTROL**

**VEA6352 DIGITAL SIMULATION OF PROTECTION SYSTEMS**

**VEB1001 PBL & ENGINEERING PRACTICE 1A**

**Campus**
Footscray Park

**Prerequisite(s)**
Year 12 mathematics or its equivalent.
Content This is a practical, PBL mode, subject in which students work in teams to solve a number of problems specifically designed to integrate with the learning and content from VEF 1001 and VEF 1003. Teams of students will have an Electrical Engineering staff member as a 'coach or mentor' whilst working on these problems. 'Specialist' staff from the VEF 1001 and VEF 1003 subjects will be available to assist students with technical aspects of the problems. Staff members from the Faculty of Business and Law, the Teaching & Learning Centre and the School of Architectural, Civil & Mechanical Engineering will be available to provide workshops to assist students with the development of generic skills.

Required Reading The use of a prescribed textbook does not conform to the philosophy inherent in PBL.

Recommended Reading To be provided upon commencement of subject.

Class Contact 120 hours of class contact per semester.

Assessment Students will be assessed in this subject on the basis of a portfolio, in which they are required to demonstrate the attainment of learning outcomes using:- peer evaluation and assessment, weekly team/client meetings, a reflective journal, reflective essays, expositions, audio/visual project presentations and written project reports.

VEB1002 PBL & ENGINEERING PRACTICE 1B

Campus Footscray Park

Prerequisite(s) VEB 1001 PBL & Engineering Practice 1A, or equivalent.

Content This is a practical, PBL mode, subject in which students work in teams to solve a number of problems specifically designed to integrate with the learning and content from VEF 1002 and VEF 1004. Teams of students will have an Electrical Engineering staff member as a 'coach or mentor' whilst working on these problems. 'Specialist' staff from the VEF 1002 and VEF 1004 subjects will be available to assist students with technical aspects of the problems. Staff members from the Faculty of Arts will be available on a weekly basis to assist with the development of communications skills. Staff members from the Faculty of Business and Law, the Teaching & Learning Centre and the School of Architectural, Civil & Mechanical Engineering will be available to provide workshops to assist students with the development of generic skills.

Required Reading The use of a prescribed textbook does not conform to the philosophy inherent in PBL.

Recommended Reading To be provided upon commencement of subject.

Class Contact 120 hours of class contact per semester.

Assessment Students will be assessed in this subject on the basis of a portfolio, in which they are required to demonstrate the attainment of learning outcomes using:- peer evaluation and assessment, weekly team/client meetings, a reflective journal, reflective essays, expositions, audio/visual project presentations and written project reports.

VEB2001 PBL & ENGINEERING PRACTICE 2A

Campus Footscray Park

Prerequisite(s) VEB1002 PBL & Engineering Practice 1B, or equivalent.

Co-requisites

Learning Outcomes Upon completion of this subject, students will be able to:

- Demonstrate the successful completion a project(s) in a specified time period,
- Research and analyse problems and identify a range of possible solutions,
- Demonstrate team management skills,
- Be able to plan and monitor the progress of a project,
- Be able to make effective written and oral presentations,
- Demonstrate an understanding of professional engineering ethics,
- Be able to articulate issues relating to sustainability,
- Communicate to professionals and non-professionals the fundamentals of the "language of engineering",
- Locate, evaluate, manage and utilise critically information for a range of purposes,
- Utilise more advanced electronic devices and incorporate them into a working design,
- Be able to produce technical reports to a professional standard,
- Demonstrate an ability to work as part of a team,
- Demonstrate abilities in time management,
- Demonstrate independence and a commitment to lifelong learning.

Content This is a practical, PBL mode, subject in which students work in teams to solve a number of problems specifically designed to integrate with the learning and content from VEF2002 and VEF2004. Teams of students will have an Electrical Engineering staff member as a 'coach or mentor' whilst working on these problems. 'Specialist' staff from the VEF2002 and VEF2004 subjects will be available to assist students with technical aspects of the problems. Staff members from the Faculty of Arts will be available on a weekly basis to assist with the development of communications skills. Staff members from the Faculty of Business and Law, the Teaching & Learning Centre and the School of Architectural, Civil & Mechanical Engineering will be available to provide workshops to assist students with the development of generic skills.

Required Reading The use of a prescribed textbook does not conform to the philosophy inherent in PBL.

Recommended Reading To be provided upon commencement of subject.

Class Contact 120 hours of class contact per semester.

Assessment Students will be assessed in this subject on the basis of a portfolio, in which they are required to demonstrate the attainment of learning outcomes using:- self and peer evaluation and assessment, weekly team/client meetings, a reflective journal, reflective essays, expositions, audio/visual project presentations and written project reports.
**VEC1001 COMPUTER ENGINEERING 1A**  
Campus Footscray Park  
Prerequisite(s) Nil  
Content The subject examines the following topics. Operating system’s functions, operating system’s functions and requirements, including real-time operation, and will examine the use of concurrent languages. The subject examines the following topics. Operating system’s functions. Program scheduling. Pipeline design techniques. Data and instruction stream. Parallelisms. Contention and arbitration. Message passing techniques. Lock out prevention. Mutual exclusion. Tagged memory systems; cache memory, FIFO, multi port. Multiprocessor operating systems. Process to process or mapping vs process sharing. Diagnostic and performance profiling program. Recovery procedure. Application program and operating system interaction. Throughput measurement. Multiprocessing. analysis of various multiprocessors, data flow machines and non Neumann machines. RISC Array processors Embedded systems, real time applications.  
Required Reading To be advised by the lecturer.  
Class Contact Three hours per week for one semester comprising lecture, tutorials and laboratories.  
Assessment Examination 60%  

**VEC6121 OBJECT ORIENTED SOFTWARE**  
Campus Footscray Park  
Prerequisite(s) Nil  
Co-requisite(s) Nil  
Content This subject will study the object oriented approach to software development through the analysis, design and implementation phases of the software life cycle. Its content includes the object oriented (OO) concepts of classes, inheritance, polymorphism, encapsulations; and the use of Object Oriented languages and environments. It applies the techniques to engineering applications.  
Required Reading To be advised by the lecturer.  
Class Contact Three hours per week for one semester comprising two hours lecturers/tutorials and one one-hour laboratory.  
Assessment Assignments 35%; examination 65%.  

**VEC6102 COMPUTER ENGINEERING 1B**  
Campus Footscray Park  
Prerequisite(s) VEC1001 Computer Engineering 1A.  
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.  
Assessment Class tests conducted throughout the semester 20%; Laboratory performance 20%; End of semester examination 60%.  

**VEC6122 OPERATING SYSTEMS AND MULTIPROCESSING**  
Campus Footscray Park  
Prerequisite(s) A course in C programming.  
Content The subject will provide the student with an appreciation of operating system's functions and requirements, including real-time operation, and will examine the use of concurrent languages. The subject examines the following topics. Operating system’s functions. Program scheduling. Pipeline design techniques. Data and instruction stream. Parallelisms. Contention and arbitration. Message passing techniques. Lock out prevention. Mutual exclusion. Tagged memory systems; cache memory, FIFO, multi port. Multiprocessor operating systems. Process to process or mapping vs process sharing. Diagnostic and performance profiling program. Recovery procedure. Application program and operating system interaction. Throughput measurement. Multiprocessing. analysis of various multiprocessors, data flow machines and non Neumann machines. RISC Array processors Embedded systems, real time applications.  
Required Reading To be advised by the lecturer.  
Class Contact Three hours per week for one semester.  
Assessment Assignment 20%; laboratory, 15%; examination 65%.  

**VEC6131 COMPUTER INTERCONNECTION HARDWARE**  
Campus Footscray Park  
Prerequisite(s) Nil  
Content The subject develops an understanding of microprocessor interconnection schemes and of the hardware and software aspects of computer networks. The topics covered are: review of synchronous and asynchronous design techniques; characteristics of bus lines and interface design; single-master buses; multiple-master bus; DMA circuits; synchronisation; computer to computer interconnection schemes, principle of operation standardisation and OSI model; point-to-point transfers, protocols, bidirectional links; error handling; links, concentrators and multiplexors; TDM circuits, PCM multiplexing; modern and network (e.g. token ring) interface design.  
Required Reading To be advised by the lecturer.  
Class Contact Three hours per week for one semester comprising two hours per week lecturers/tutorials and one one-hour laboratory.  
Assessment Final examination 65%; assignments and laboratory work 35%. Students must attain a satisfactory level of performance in each assessable component to obtain a subject pass.  

**VEC6132 DIGITAL SYSTEM MODELLING AND SIMULATION**  
Campus Footscray Park  
Prerequisite(s) Nil  
Content The subject will accustom the student with the computer aided design environment, and examines modelling and software techniques applicable to digital design problems. Topics to be studied include computer aided design tools, software, user interfaces; discrete event modelling and modelling languages VHDL; digital logic simulators. FPGA implementation.
VEC6141 SOFTWARE ENGINEERING
Campus Footscray Park
Prerequisites Approved preliminary course in Software Engineering.
Content The subject will strengthen the student's knowledge of concepts required to produce high quality software systems within known limitations of resources using sound engineering principles and effective tools. The subject examines principles of software engineering. The topics covered are part of the software life cycle. Requirements elicitation, requirements analysis and specification, the use of formal specification languages such as 'Z'. Analysis and design methods using graphical notations e.g. UML, implementation considerations, testing strategies and construction of test cases, software engineering environments and CASE; tools.
Class Contact Three hours per week for one semester comprising approximately 70% lecturers/tutorials and 30% laboratory.
Assessment Examination, 65%; laboratory work, tests and assignments 35%. Students must satisfy examiners in each assessable component to pass the subject.

VEC6142 MANAGING SOFTWARE PROJECTS
Campus Footscray Park
Prerequisite(s) VEG5011 Software Engineering.
Content The subject will develop and improve the skills required to successfully plan and manage software development efforts. The subject content includes: the role of specification in the product life cycle; systems analysis and design; feasibility study and development cycle; the applicability of DP techniques to technical program management; defining software requirements, documentation; preparation of good project plans, size and function point metrics and their use in estimation of time and costs; implementing management controls for design and integration; the use of standard project management techniques and software packages; team working, codes of practice, whole life costing, system support plans; hardware/software integration and testing, product support and maintenance, controlling changes to source code and documentation; control of the programming support environment. The assignment and laboratory work consists of design, analysis and management of a large scale software project.
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising approximately 70% lecturers/tutorials and 30% laboratory.
Assessment Examination, 50%; assignments and project work, 50%.

VEC6151 DATABASE AND QUERY SYSTEMS
Campus Footscray Park
Prerequisites Nil
Content The subject will further the understanding of the design implementation and applications of database systems. The subject examines introduction to database systems; different database models; examples of current systems; overviews and use of DMBS, physical data organisation, database architecture, SQI, query by example; query optimisation; design theory for relational databases, database integrity and security; implementation issues, distributed system.
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising approximately 70% lectures/tutorials and 30% laboratory.
Assessment Final examination 65%; assignments, 20%; laboratory work, 15%.

VEC6152 APPLIED KNOWLEDGE SYSTEMS
Campus Footscray Park
Prerequisites(s) Nil
Content The subject provides an introduction to Knowledge Based Systems. It gives an overview of expert systems, neural networks, knowledge programming and natural language systems and examines software associated with these. The subject will familiarise the students with a number of techniques for applying knowledge based systems to real world problems in the control, monitoring and planning domains, including how to select appropriate tools to analyse problems.

Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester. This includes two hours of lecture per week, one hour of tutorial and one hour of laboratory for every two weeks.
Assessment Tests/Assignments: 35%; Examination: 65%. A pass in each component of assessment is required for a subject pass.

VED3001 ENGINEERING DESIGN & PROJECTS 3A
Campus Footscray Park
Prerequisite(s) Completed Year 2 of the course.
Content (a) An individual design task based on a supplied circuit schematic, including design simulation and revision, circuit board design, electronics construction, initial testing and troubleshooting, final performance measurement using laboratory test equipment, reporting on the project via oral progress talks, a final oral presentation, and a formal written report. (b) The theory component covers feedback and amplifier stability, differential amplifiers with active loads, power amplifiers, heat transfer, heating design, properties of sound, noise exposure limits, noise control, illumination basics, properties of artificial light sources, and interior illumination design.

VED3002 ENGINEERING DESIGN & PROJECTS 3B
Campus Footscray Park
Prerequisite(s) Completed VED3001 Engineering Design & Projects 3A.
Content (a) An individual design task based on a supplied specification, including a feasibility study, selection of the best design approach, design simulation and revision, circuit board design, electronics construction and housing, initial testing and troubleshooting, and final performance measurement using laboratory test equipment. (b) Reporting on the project using oral progress talks, a final oral presentation, and a formal written report.
(c) Lecture material covering revision of probability theory, leading to an introduction to the statistical theory of reliability.


VED3003 ENGINEERING DESIGN & PROJECTS 3C
Campus Footscray Park
Prerequisite(s) Nil
Content (a) An individual design task based on a supplied specification, including a feasibility study, selection of the best design approach, design simulation and revision, circuit board design, electronics construction and housing, initial testing and troubleshooting, and final performance measurement using laboratory test equipment. (b) Reporting on the project using oral progress talks, a final oral presentation, and a formal written report.


Class Contact 60 hours per semester, consisting of 30 hours of labs, and 30 hours of lectures. Students are expected to spend additional non-class time on project work.
Assessment Progress talks 5%, final presentation talk 5%, project report 10%, project performance and quality 40%, assignment, exam 40%. Completion of the project, and a pass in both the project and theory sections of the subject is required.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

30%. A pass in both the project and theory sections of the subject is required, and the project must be completed and working on time to qualify for assessment.

VED3102 ENGINEERING DESIGN AND PROJECTS 3C

VED4001 ENGINEERING DESIGN & PROJECTS 4A
Campus Footscray Park

Prerequisite(s) Completed year 3 of the course.

Content The subject consolidates engineering design experience by requiring each student to undertake an individual engineering design project, selected from a list of projects on offer. Projects are sourced from industry and academia, and span both semesters. In this subject, progress to a viable halfway stage is expected. Each student is supervised by a staff member expert in the area of the project. Oral presentation skills, and report writing ability are further developed from the level attained in third year.

The theory component covers the philosophy of system design, and designing for variability, emphasising the goal between designing a working prototype, and designing for production. Worst case and Monte Carlo techniques are covered.


Class Contact 48 hours per semester, comprising 36 hours of project work and project reporting, and 12 hours of lectures. Students are expected to spend additional non-class time on project work.

Assessment Project contract 5%, feasibility study report 10%, progress talks 5%, final presentation talk 10%, project stage A report, and project progress and quality 45%, assignments, tests 25%.

VED4002 ENGINEERING DESIGN & PROJECTS 4B
Campus Footscray Park

Prerequisite(s) Completed VED4001 Engineering Design & Projects 4A.

Content The subject consolidates engineering design experience by requiring each student to complete an individual engineering design project, commenced in stage A of the subject. Projects are sourced from industry and academia, and span both semesters. In this subject, completion of a successful working project is expected. Each student is supervised by a staff member, expert in the area of the project. Oral presentation skills, and report writing ability are further developed, culminating in the final formal oral presentation, and final written report. The theory component concentrates on electromagnetic interference (EMI) and electromagnetic compatibility (EMC), giving an introduction to the need for regulation, and methods of pre-compliance and compliance testing. Design methods to improve EMC are discussed.


Class Contact 48 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.

Assessment Mid semester test 20%; Laboratory performance/written report 20%; End of semester examination 60% (close book, three hours).

VEE3000 ELECTRICAL MACHINES AND ENERGY SYSTEMS
Campus Footscray Park

Prerequisite(s) 2nd year subject VEG2002 Introduction to Engineering Systems.


Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.

Assessment Mid semester test 20%; Laboratory performance/written report 20%; End of semester examination 60% (close book, three hours).

VEE4000 POWER ELECTRONICS AND DRIVES B
Campus Footscray Park

Prerequisite(s) 2nd year subject VEG2002 Introduction to Engineering Systems 2B.


Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.

Assessment Mid semester test 20%; Laboratory performance/written report 20%; End of semester examination 60% (close book, three hours).

VEE4100 ELECTRIC ENERGY SYSTEMS ANALYSIS AND OPERATION
Campus Footscray Park

Prerequisite(s) VEE3001 Introduction to Electric Machines, VEE3002 Introduction to Electrical Power Systems.

Content Load flow analysis techniques, Gauss Siedel and Newton Raphson methods, uses of load flow analysis, cases studies. Short circuit analysis using Zbus, case studies. Steady state and transient stability analysis, case studies. Load-frequency control and power system operation. Electric energy system interconnection. High voltage DC systems and their application in electric energy transmission. FACTS (power electronics) technology for electric power transmission systems.


Class Contact 36 hours per semester comprising 24 hours of lectures/tutorial and 12 hours of laboratory.
VEE4200 ELECTRIC ENERGY SYSTEMS PROTECTION
Campus Footscray Park
Prerequisite(s) VEE3001 Introduction to Electric Machines, VEE3002 Introduction to Electrical Power Systems
Content This subject covers the planning, design and operation of electrical protection systems for the generation, transmission and distribution electric energy: planning, design standards and performance requirements; principles and types of protection systems (overcurrent, impedance, differential, backup, fuses); application to generators, motors, transmission lines, transformers, busbars, and distribution; instrument transformer steady state and transient behaviour; electrical studies for planning and design of protection systems; power system communications for protection application.
Required Reading Lecture notes provided.
Class Contact 36 hours per semester comprising 24 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Assignment and Laboratory Exercises 40%; End of semester examination 60%; A pass in each component of assessment is required for a subject pass.

VEE4300 ELECTRIC ENERGY TRANSMISSION AND DISTRIBUTION
Campus Footscray Park
Prerequisite(s) VEE3001 Introduction to Electric Machines, VEE3002 Introduction to Electrical Power Systems
Content This subject covers the planning, design and operation of electrical energy transmission and distribution networks.
- planning, design standards and performance requirements.
- voltage control.
- power quality and reliability.
- overvoltage protection.
- earthing and safety.
- embedded generation.
- power electronic systems for performance improvement.
Required Reading Lecture notes provided.
Class Contact 36 hours per semester comprising 24 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Assignment and Laboratory Exercises 40%; End of semester examination 60%; A pass in each component of assessment is required for a subject pass.

VEE4400 HIGH VOLTAGE ENGINEERING
Campus Footscray Park
Prerequisite(s) VEE3001 Introduction to Electric Machines, VEE3002 Introduction to Electrical Power Systems
Content Electrical insulation properties and characteristics, insulator selection, insulation co-ordination in electric energy networks, sources of overvoltages, lightning impact on transmission and distribution networks, surge propagation theory, circuit interruption theory and circuit breaker operation.
Required Reading Lecture notes provided.
Class Contact 36 hours per semester comprising 24 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Assignment and Laboratory Exercises 40%; End of semester examination 60%; A pass in each component of assessment is required for a subject pass.
Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeofPostgraduateResearch/PolicyProcessesandGuidelines/

VEE8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeofPostgraduateResearch/PolicyProcessesandGuidelines/

VEE8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeofPostgraduateResearch/PolicyProcessesandGuidelines/

VEE8012 RESEARCH THESIS 2 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeofPostgraduateResearch/PolicyProcessesandGuidelines/

VEF1001 ENABLING SCIENCES 1A
Campus Footscray Park
Prerequisite(s) Year 12 mathematics or its equivalent.
Content Basic algebra, including index, log laws, indicial and log equations, algebraic expansions; Functions, straight line, parabola, circle etc. Mod function. Domain, range, inverse functions; Trig. Functions and their graphs, period amplitude, degrees radians. Basic trig identities, Inverse Trig functions. Converting aCosx + bSinx to single Sin, Cosine terms; Limits, continuity, differentiation, rules, higher derivatives. Implicit integration. Tangents and Normals; Parametric differentiation, derivatives of logs and exponentials. Rates of change, maximum and minimum problems. Trig and inverse trig derivatives, logarithmic differentiation; Introduction to integration. Fundamental theorem of Integral Calculus. Substitution rule. Areas, Mean values, Root mean square. Integration by parts, integration by substitution, partial fractions. Simple integration by parts; Introduction to differential equations, separation of variables, population growth, air resistance; Complex numbers. Physical Units and Dimensions: Physical quantities, system of units and standards, dimensions, unit conversion, significant figures.
Electrical Devices: Fundamentals of electric circuits, series and parallel circuits, circuit analysis, DC and AC circuits, operation, performance characteristics and selection of motors and generators.
Semiconductor Devices: Introduction to applications of semiconductor devices, diodes and I-V characteristics, rectifying circuits, bridge rectifiers, smoothing circuits, introduction to operational amplifiers.
Class Contact 60 hours of lectures/tutorials per semester.
Assessment There will be class tests, worth 30% and an end of semester examination worth 70%.

VEF1002 ENABLING SCIENCES 1B
Campus Footscray Park
Prerequisite(s) VEF 1001 Enabling Sciences 1A.
Content Descriptive statistics, data, histograms etc. Describing data, mean, median, mode, quantiles, measures of dispersion; Introduction to probability, sample space, mutually exclusive and independent events. Intro to PPDFs and intro. to Normal distribution; Normal distribution, mean of n variate values, 3.2.1 sigma confidence limits. Binomial, Poisson distributions: Exponential, Hypergeometric distr. Normal approx. to Binomial and Poisson. Sample mean. Central limit theorem; Determinants, matrices, Cramer's rule, inversion; Solution of systems of algebraic equations. Row operation, Gaussian elimination, echelon form, ranks; Newton Raphson, numerical integration. Midpoint, Trapezoidal and Simpsons rules; Introduction to series and some convergence tests; Simple power series and the Maclaurin series; Partial differentiation, algebraic, trig, exp, and log functions. Rules; Partial differentiation, conditions for max/min. Simple problems; Intro to second order constant coefficient, homogeneous D.s. Three types of solutions via the auxiliary equation – Mechanics: Scalars and vectors, displacement, velocity and acceleration, motion in one and two dimensions, force, Newton's laws of motion, friction, work and energy, conservation laws. Momentum and conservation laws, impulse and collisions, rotational motion, moments of inertia, centre of mass, torque, angular momentum, statics; Nuclear Physics: Properties of the nucleus, binding energy, radioactivity, fission, fusion and fission; Quantum Physics Planck's hypothesis: photons and the photoelectric effect, photons and the Compton effect, pair production, wave – particle duality, wave nature of matter, Bohr model of the atom, Heisenberg uncertainty principle, quantum numbers.
Class Contact 60 hours of lectures/tutorials per semester.
Assessment There will be class tests, worth 30% and an end of semester examination worth 70%.

VEF1003 ELECTRICAL FUNDAMENTALS 1A
Campus Footscray Park
Prerequisite(s) Year 12 mathematics or its equivalent.
Computer Programming: An overview of a typical computer system. The program creation process; editing, compiling and debugging. Data types, correct choice of type and their range. The use of variable, assignment, arithmetic and logical operations. Flow control using loops; if, while and switch statements. An Introduction to arrays.
Required Reading Ives, R Introduction to Electrical and Electronic Engineering, Victoria University; Savitch, W. Problem Solving with C++, 4th edition, 2004, Addison-Wesley.
Class Contact 60 hours of lectures/tutorials per semester.
Assessment There will be class tests, worth 30% and an end of semester examination worth 70%.
VEF1004 ELECTRICAL FUNDAMENTALS 1B
Campus Footscray Park
Prerequisite(s) VEF 1003 Electrical Fundamentals 1A or equivalent.


Required Reading Ives, R, Electronic and Electrical Engineering, Victoria University.


Class Contact 60 hours of lectures/tutorials per semester.

Assessment There will be class tests, worth 30% and an end of semester examination worth 70%.

VEF2001 LINEAR SYSTEMS AND MATHEMATICS 2A
Campus Footscray Park
Prerequisites VEF1002 Enabling Sciences 1B and VEF1004 Electrical Fundamentals 1B


Class Contact Linear Systems component: Three hours of lecture and problem solving per week for twelve weeks, for one semester. Total 36 hours.

Mathematics component: Two hours of lectures and problem solving per week for twelve weeks, for one semester. Total 24 hours.

Assessment This subject is designed to complement our PBL subjects and as such will have significant formative assessment components. In addition there will be summative assessment in the form of multiple “skills audits” to account for 30% and end of semester examinations accounting for 70% of the total marks. The end of semester examinations include a three-hour Systems Component Examination (accounting for 40% of the total marks) and a three-hour Probability and Statistics Component Examination (accounting for 30% of the total marks).

VEF2003 SYSTEMS & APPLICATIONS 2C
Campus Footscray Park
Prerequisites VEF1003 Electrical Fundamentals 1A or equivalent

Co-requisites Learning Outcomes Upon completion of this subject students will be able to:

- Design and implement combinational and sequential data processing elements using VHDL with PLDs and manufacturers components.
- Analyse an engineering problem that requires a computational solution;
- construct suitable “classes” and functions for an algorithmic solution. Code and test the solution.
- Create the hardware and software requirements for an engineering task requiring a small microprocessor based system. Design, build and test the system including the hardware and software components.
- Analyse and design simpler rectifier based power supplies and small signal amplifiers.

Content Analog Systems: PN diodes, electrical characteristics, applications. Zener diodes. Bipolar transistors, characteristics, small signal model analysis and design. MOSFET devices, characteristics, configurations and use in amplifier design. Voltage regulators, series and shunt types.


Microprocessor Systems: The architectural structure of a simple 8-bit microprocessor/microcontroller. Program and data organization, programmers model, register sets, instruction set and addressing
modes. Assembly language programming. Interfacing via external ports; timers, interrupts and special function peripherals.

**Required Reading**
- Savitch, W. Problem Solving with C++, 4th Edn, 2004, Addison-Wesley

**Recommended Reading**

**Class Contact** 60 hours of lectures/tutorials per semester.

**Assessment**
- This subject will be assessed by the following percentages: 70% written examinations and 30% coursework.
- The course will be assessed through 60 hours of lectures/tutorials and 30% coursework.
- There will be summative assessment in the form of multiple "skills audits" to account for 30% and two 3 hour end of semester examinations accounting for 70% (35%+35%) of the total marks.

**VEF2004 SYSTEMS & APPLICATIONS 2D**

**Campus** Footscray Park

**Prerequisites** VEF2003

**Co-requisites**
- VEG4002 Professional Engineering Practice 4B
- VEG4001 Professional Engineering Practice 4A

**Learning Outcomes**
- Upon completion of this subject students will be able to:
  - Analyse a range of circuit types and assess the circuit performance.
  - Design circuits to meet performance criteria and select suitable components for circuit realization.
  - Implement optimal state machines for a range of electronic engineering applications.
  - Apply a system level approach to digital design using the algorithmic state-machine design paradigm.
  - Be able to appreciate fundamentals of mechanical and electromagnetic energy conversion.
  - Be able to analyse simple power systems containing ac machines, transformers and balanced 3 phase ac supplies.

**Content**
- Analog: Differential amplifiers, models of operation, gain, CMMR; design for performance characteristic. Frequency response of amplifiers; an introduction to wide-band and high frequency amplifier design.
- Digital Systems: Synchronous state machine analysis and design.
- Systemic: Design circuits to meet performance criteria and select suitable components for circuit realization.

**Recommended Reading**

**Class Contact** 60 hours of lectures/tutorials per semester.

**Assessment**
- This subject is designed to complement our PBL subjects and as such will have significant formative assessment components. In addition there will be summative assessment in the form of multiple "skills audits" to account for 30% and two 3 hour end of semester examinations accounting for 70% (35%+35%) of the total marks.

Class Contact The equivalent of 60 hours per semester. It is expected that class contact in this subject will be flexible with different content areas utilized for different attendance regimes.

Assessment Two 15 page* assignments – totalling 50%; One 30-minute seminar presentation – 20%; Completion of student portfolio and University Capstone Task – 20%; Construction of a resume, response to a position application and mock interview. – 10%.

VEG4100 DIGITAL SIGNAL PROCESSING A

Campus Footscray Park
Prerequisite(s) VEL2002 Linear Systems and Mathematics 2B
Content Introduction Continuous-time and discrete-time signals. The sampling theorem. Impulse sampling and the zero-order hold. The z-transform.

Required Reading Digital Signal Processing 1 Subject Notes, Victoria University.


Class Contact 30 hours per semester comprising 24 hours of lectures/tutorial and 6 hours of laboratory.

Assessment Laboratory assessment 30%; End of semester, open book examination 70%.

VEH3000 COMPUTER AND DIGITAL DESIGN A

Campus Footscray Park
Prerequisite(s) VEC2001 Computer Engineering 2A and VEH2002 Electronic Systems 2A


Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.

Assessment Class tests conducted throughout the semester 20%; Laboratory performance 20%; End of semester examination 60%.

VEH4000 COMPUTER AND DIGITAL DESIGN B

Campus Footscray Park
Prerequisite(s) VEH3000 Computer and Digital Design A.


Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.

Assessment Class tests conducted throughout the semester 20%; Laboratory performance 20%; End of semester examination 60%.

VEH6001 HDL AND HIGH LEVEL SYNTHESIS

Campus Chipsklls Partner Universities
Prerequisite(s) Completed Digital Systems at undergraduate level or equivalent.


Class Contact Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises and project.

Assessment Assignment and laboratory exercises, 20%; project, 50%; and final examination, 30%.

VEH6002 IC DESIGN

Campus Chipsklls Partner Universities
Prerequisite(s) Completed Digital Systems at undergraduate level or equivalent.

Content Overview of MOS and sub-micron technology, scaling and signal integrity, IC design techniques. CMOS cell design: device-level design constraints, gate design, pass transistor circuits, sequential circuits, mask level design. Layout considerations, design rules and

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising one hour per week lectures and three hours per week of laboratory exercises and project.

**Assessment**
Assignment and laboratory exercises, 30%; project, 50%; and final examination, 20%.

**VEH6003 EDA TOOLS AND DESIGN METHODOLOGY**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
Completed Digital Systems at undergraduate level or equivalent.

**Content**

**Required Reading**
Current available text book- students to be advised.

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising one hour per week lectures and four hours per week of laboratory/workshop and project.

**Assessment**
Assignment and laboratory exercises, 60%; research project, 40%.

**VEH6004 DIGITAL SYSTEM DESIGN**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
Completed JRM6001 or equivalent.

**Content**

**Required Reading**
Current available text book – Student to be advised.

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises.

**Assessment**
Assignment and laboratory exercises, 30%; project, 40%; and final examination, 30%.

**VEH6006 EMERGING TOPICS IN IC DESIGN**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
Nil.

**Content**
New technologies such as: Silicon carbide high-power devices, Quantum based devices, quantum dots Nanometer MOSFETs, Wide bandgap materials and devices, Plasma-wave electronics, Ferroelectric devices. Overview of new process technologies. Deep sub-micron technology and noise. Ultra-high-speed devices, including microwave and optical devices. New Systems-Level architectures, such Nanowire arrays, Neuromorphic architectures, Reconfigurable architectures, Wafer-scale systems, Memory systems. New EDA tools and future technology projections. EMC: regulations, measurement and testing, Design issues related to EMC.

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising two hours per week lectures and two hours per week of workshops and seminars.

**Assessment**
Assignments, 30%; seminars, 40%; and research project, 30%.

**VEH6007 ADVANCED VLSI DESIGN**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
VEH6002 or equivalent.

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising one hour per week lectures and three hours per week of laboratory exercises and project.

**Assessment**
Assignment and laboratory exercises, 30%; project, 50%; and final examination, 20%.

**VEH6008 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
Completed DSP course at undergraduate level.

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises and project.

**Assessment**
Assignment and laboratory exercises, 30%; project, 40%; and final examination, 30%.

**VEH6009 RELIABILITY AND TESTABILITY IN IC DESIGN**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**
VEH6001, EEH6002 and VEH6003 or equivalents.

**Content**
Reliability: parallel and serial reliability, failure rates. Reliability as affected by smaller dimensions and faster devices, thermal considerations. Redundancy and fault tolerance. Design for device reliability. Functional and formal verification and fault modelling. Hardware/software co-design, co-verification and co-simulation. Timing and power analysis. Design for testability and ATPG and fault coverage tools Layout issues for testability. Testing methodologies (In-circuit, Built in self test), Boundary Scan Testing. Memory testing, BIST of RAMS, RAM interconnection testing, Scan based testing of...

Class Contact Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises.

Assessment Assignment and laboratory exercises, 60%; and final examination, 40%

VEH6010 INTRODUCTION TO MICROSYSTEM TECHNOLOGY
Campus Chipskills Partner Universities
Prerequisite(s) Nil


Class Contact Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises.

Assessment Assignments, 20%; laboratory exercises, 30%; project, 30 and final examination, 20%

VEH6011 INTRODUCTION TO SEMICONDUCTOR DEVICE FABRICATION
Campus Chipskills Partner Universities
Prerequisite(s) Nil

Content Fundamental principles of fabrication processes, physical and chemical models for crystal growth, oxidation, ion implantation, etching, deposition, lithography and metallisation. Emphasis is on practical aspects of silicon device fabrication, including wafer cleaning, photolithography, etching, oxidation, diffusion, ion implantation, chemical vapour deposition, physical sputtering and wafer testing.

Imperfections in semiconductors, crystal growth, solid solubility, alloying and diffusion, ion implantation, oxide masking, and epitaxy. Practical and fundamental limits to the evolution of the technology of MOS and bipolar devices. How are integrated circuits fabricated and what future changes are likely? The implications for device performance caused by material properties and fabrication techniques. Fabrication techniques for bipolar and MOS-devices, and the electrical performance of devices based on these techniques. Comparison of fabrication technologies for silicon and gallium arsenide devices. Processes and fabrication equipment to be studied will include oxidation/diffusion, CVD reactors, photolithography, plasma etching, vacuum evaporator, ion implantation, etc. Introduction to computer modelling of processing steps such as etching, lithography, diffusion, implantation (eg SUPREME).


Class Contact Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises.

Assessment Assignments, 20%; laboratory exercises, 30%; and final examination, 50%

VEH6013 PROJECT MANAGEMENT AND ENTREPRENEURSHIP
Campus Chipskills Partner Universities
Prerequisite(s) Nil


Required Reading Current available text book – students to be advised. Appropriate journal papers.


Class Contact Four hours per week for one semester. Assessment Assignments, 20%; seminar presentations, 10%; project, 30%; and final examination, 40%

VEH6014 RF AND MIXED SIGNAL DESIGN
Campus Chipskills Partner Universities
Prerequisite(s) Completed Analog Electronics at undergraduate level.

Content Basic concepts of wireless communication systems design. Transceiver architectures. VLSI design issues and layout techniques in wireless transceiver design. Radio circuits, LNAs, oscillators, mixers, limiters, phase detectors, frequency synthesisers, PLLs and power amplifiers. Low voltage low power design techniques and design flow for analog and mixed signal circuits and systems. OpAmps, comparators, A-to-D and D-to-A conversion circuits. Noise analysis and design tradeoffs – cost, power and performance. Students will develop hands-on experience in design, simulation, verification and implementation using industry standard EDA tools.


Class Contact Four hours per week for one semester comprising two hours per week lectures and two hours per week of laboratory exercises and project.

Assessment Assignment and laboratory exercises, 30%; project, 50%; and final examination, 20%

VEH6016 VERILOG HDL
Campus Footscray Park
Prerequisite(s) Completed Digital Systems at undergraduate level or equivalent.

Content The role of HDL in design, Top-down introduction to Verilog, Verilog for description of logic circuits, Verilog language constructs, behavioural modelling, logic level modelling, concurrent process and switch level modelling. Timing analysis, synthesis and test benches.


Class Contact Four hours per week for one semester, comprising of two hour lecture and two hours of tutorial/laboratory and project work.

Assessment Assignments and laboratory exercises, 20%; project, 30%; and final examination, 50%

VEH6017 DIGITAL SYSTEM DESIGN WITH VERILOG HDL
Campus Footscray Park
Prerequisite(s) Completed EEH6016/EEH6001 or equivalent

Content Introduction to Verilog and digital systems design for VLSI, combinational and sequential circuits, design verification, algorithmic state machine design, finite state machine specific states in Verilog, hierarchical modelling concepts, synchronous and asynchronous systems, pipelined architectures, processor architectures, clocks timing and clock distribution, synthesis and advanced concepts in brief.


Class Contact four hours per week for one semester, comprising of two hour lecture and two hours of tutorial/laboratory and project work.

Assessment Assignments and laboratory exercises, 35%; project, 33%; final examination, 30%.

VEH6018 ANALOG & MIXED SIGNAL DESIGN
Campus Footscray Park
Co-requisite(s) EEE6003 – EDA Tools & Design Methodology and studied Analog electronics at undergraduate level.

Content The design of CMOS analog and mixed-signal integrated circuits is covered. Design concepts of high speed low power amplifiers, filters, sample and hold circuits, comparators, digit to analog and analog to digital converters are fully analysed. Noise and performance analysis and design tradeoffs – cost, power and performance. Students will develop hands-on experience in design, simulation, verification and implementation using industry standard EDA tools.


Class Contact four hours per week for one semester, comprising of one hour lecture and three hours of laboratory and project work.

Assessment Assignments and laboratory exercises, 20%; project, 50%; final examination, 30%.

VEH6020 MINOR PROJECT
Campus Chipskills Partner Universities
Prerequisite(s) Completed EEE6001, EEE6002, EEE6003 or equivalent.

Content It is expected that the majority of industry-based students will undertake projects as part of their normal employment, where relevant opportunities exist and suitable resources and supervision can be guaranteed. A project can be structured to be the equivalent of two units of study. Projects would be expected to demonstrate a good working knowledge in chip design and implementation. Students must demonstrate their ability to integrate and draw upon their coursework studies relevant to the project. A dissertation of no less than 10000 words must be submitted and will be examined by one examiner selected by the examining panel for this module. Commercial in-confidence programs can be undertaken, with appropriate restrictions on publication and choice of examiners. Intellectual property of projects initiated by a company and undertaken in that company will remain with the company. All other projects will be subject to the Intellectual Property policy of the relevant university partner.

Required Reading Current available text – students to be advised.


Class Contact Sixteen hours per week for one semester. Assessment Assessment will be based on project progress and demonstration, 20%; Final project demo 30%; final report, 40% and an oral poster presentation, 10%.

VEH6101 ASIC DESIGN TECHNIQUES
Campus Footscray Park
Prerequisite(s) Nil.

Co-requisites VEH6151 VHDL and High-level Synthesis or equivalent


Required Reading Selected papers from IEEE/IEE Journal. To be advised by the lecturer.


Class Contact Four hours per week for one semester comprising one hour per week of lecture and three hours per week of tutorial/laboratory.

Assessment Assignments 20%; Research Project 80%.

VEH6102 CUSTOM IC DESIGN B
Campus Footscray Park
Prerequisite(s) VEH6121 Basic IC Design or equivalent


Required Reading Selected papers from IEEE/IEE Journal. To be advised by the lecturer.


Class Contact Four hours per week for one semester comprising one hour per week of lecture and three hours per week of project.

Assessment Assignments, 20%; Project, 80%.

VEH6111 DIGITAL CIRCUIT DESIGN
Campus Footscray Park
Prerequisite(s) Completed Digital Design at undergraduate level or equivalent


Veh6121 Basic IC Design/Devices
Campus Footscray Park
Prerequisite(s) Completed Digital Design at undergraduate level or equivalent.
Content Bipolar and CMOS structures. Logic design: Introduction to CMOS circuit design: Switch level analysis of NMOS and CMOS structures, CMOS logic gates using static and dynamic logic, Precharging techniques, latch up, pass transistor/transmission gate logic. PLA logic: static and dynamic design. Memory. Design of subsystems using sequential logic.
Class Contact Four hours per week for one semester comprising two hours per week of lecture and two hours per week of tutorial/laboratory.
Assessment Test, assignments and laboratory exercises 40%, final examination 60.

Veh6122 Custom IC Design A
Campus Footscray Park
Prerequisite(s) Veh6121 Basic IC Design/Devices or equivalent
Required Reading Gopalan, K., 1996, Introduction to Digital Microelectronic Circuits, IRWIN.
Class Contact Four hours per week for one semester comprising one hour per week of lecture and three hours per week of research project.
Assessment Assignments, 40%; project, 60.

Veh6132 Integrated Circuit Testability
Campus Footscray Park
Prerequisite(s) Veh6001, Veh6002 and Veh6003 or equivalents.
Recommended Reading Pucknell, D.A. and Esraghian, K., 1994, Basic VLSI Design System and Circuits, Prentice Hall.
Class Contact Four hours per week for one semester comprising two hours per week of lecture and two hours per week of tutorial/laboratory.
Assessment Assignments and laboratory exercises 60%, final examination 40.

Veh6142 Emerging Technologies
Campus Footscray Park
Prerequisite(s) Nil
Required Reading Selected papers from IEEE/IEE Journals. To be advised by the lecturer.
Class Contact Four hours per week for one semester comprising of one hour per week of lecture and three hours per week of research project.
Assessment Assignments, 40%; final project, 60.

Veh6151 VHDL and High Level Synthesis
Campus Footscray Park
Prerequisite(s) Nil
Class Contact Four hours per week for one semester comprising two hours per week of lecture and two hour per week of tutorial/laboratory.
Assessment Assignment & laboratory exercises 20%, project 50%; final examination, 30.

Veh6152 Microprocessor Design Techniques
Campus Footscray Park
Prerequisite(s) Veh6111 Digital Circuit Design
Content 808020 programming model, data organisation, addressing modes and instructions sets. Exception processing, stack frames, parameter passing and procedure calls. Software development for embedded systems. External bus behaviour and design of decoders, Stack and BERR circuitry using PLDs. Interfacing memory and peripheral devices. Embedded microcontroller: Modes – architecture, features, peripherals and programming. Coprocessor interface and memory management.
Required Reading Selected papers from IEEE/IEE Journals. To be advised by the lecturer.
Class Contact Four hours per week for one semester comprising two hours per week of lecture and two hours per week of tutorial/laboratory.
Assessment Test, assignments and laboratory exercises 40%, final examination 60.

Veh1001 Circuit Theory and Electronics 1A
Campus Footscray Park
Prerequisite(s) Nil
Required Reading Handbook of Communication Skills for First Year Students in the Faculty of Engineering, Science and Technology, Faculty of Arts, Victoria University; Ives, R Introduction to Electrical and Electronic Engineering, Victoria University.
Class Contact 60 hours per semester comprising 36 hours of lectures/tutorial and 24 hours of laboratory/workshops.
Assessment Laboratory Report/Oral Demonstration 20%; Mid-semester test 10%; Laboratory performance 10%; End of semester, open book examination 60%.

VEL1002 CIRCUIT THEORY AND ELECTRONICS 1B
Campus Footscray Park
Prerequisite(s) VEL1001 Circuit Theory and Electronics 1A.
Required Reading Handbook of Communication Skills for First Year Students in the Faculty of Health, Engineering and Science, Faculty of Arts, Victoria University; Ives, R Electrical and Electronic Engineering, Victoria University.
Class Contact 60 hours per semester consisting 36 hours of lectures/tutorial and 24 hours of laboratory/workshops.
Assessment Laboratory Report/Oral Demonstration 20%; Mid-semester test 10%; Laboratory performance 10%; End of semester, open book examination 60%.

VEM2012 ELECTRICAL ENGINEERING
Campus Footscray Park
Prerequisite(s) REP1002 Engineering Physics 1C.
Class Contact 60 hours of lectures, tutorials and laboratory work.
Assessment Laboratory report #1, 5%; Laboratory report #2, 5%; Laboratory report #3, 5%; Computer based assignment, 10%; Mid-semester test, 10%; Tutorial presentation, 5%; three hour examination, 60%.

VEM3000 EDA TOOLS AND DESIGN METHODOLOGY A
Campus Footscray Park
Prerequisite(s) Completed Second year.
Class Contact 5 hours per week for one semester, comprising of two hours lecture and three hours of laboratory work.
Assessment Laboratory Work: 70%; Assignment: 30%.

VEM4000 INTEGRATED CIRCUIT DESIGN B
Campus Footscray Park
Prerequisite(s) VEM3000 – EDA Tools and Design Methodology
Content Introduction to VLSI Circuits and Systems. Introduction to silicon fabrication process. Design Methodology. Basic CMOS integrated circuits design, including overview of MOS technology, complex complementary CMOS design, static and dynamic design techniques. Circuit protection and scaling. Students will develop hands-on experience in design, simulation, verification and implementation using industry standard EDA tools.
Class Contact 5 hours per week for one semester, comprising of two hour lecture and three hours of laboratory and project work.
Assessment Laboratory exercises: 20%; Project: 20%; Final Examination: 60%.

VEM4100 ANALOG AND MIXED SIGNAL DESIGN
Campus Footscray Park
Prerequisite(s) Completed VEM3001 Custom IC Design and EDA Tools and Design Methodologies.
Content The design of CMOS analog and mixed-signal integrated circuits is covered. Design using high performance, low power amplifiers, filters, sample and hold circuits, comparators, digital to analog and analog to digital converters are fully analysed. Students will develop hands-on experience in design, simulation, verification and implementation using industry standard EDA tools.
Class Contact 2.5 hours per week for one semester, comprising of one hour lecture and 1.5 hours of laboratory and project work.
Assessment Laboratory exercises: 20%; Project: 20%; Final Examination: 60%.

VEM4200 ASIC DESIGN
Campus Footscray Park
Prerequisite(s) Completed VEM3000 EDA Tools and Design Methodologies
Content Application Specific Integrated Circuits (ASIC) introduction, ASIC VLSI design cycle, fundamental approaches and design aspects, Full and Semi Custom design methodology, IBM ASIC design flow – place & route, ESD failure, and ESD protection.
Class Contact 2.5 hours per week for one semester, comprising of one hour lecture and 1.5 hours of laboratory and project work.
Assessment Assignment: 20%; Project: 20%; Exam: 60%.

VEM4300 EMBEDDED SYSTEMS DESIGN
Campus Footscray Park
Prerequisite(s) Completed Second Year.
Content Overview of embedded systems. Embedded system design cycle and system modelling. Embedded system hardware and software. Real-time embedded system. Embedded system specification and verification. Hardware/software co-design, partitioning and tradeoffs. Embedded development tools. Analysis and design methods using graphical notations eg. UML, implementation considerations, testing strategies and construction of test cases, software engineering environments and CASE tools. Embedded system design and verification.
VeM4000 High Level Synthesis – Verilog
Campus Footscray Park
Prerequisite(s): Completed Second Year.
Class Contact: 2.5 hours per week for one semester, comprising of one hour lecture and 1.5 hours of laboratory and project work.
Assessment: Laboratory Exercises: 30%; Assignment: 10%; Exam: 60%.

VeM4500 VLSI Design
Campus Footscray Park
Prerequisite(s): Completed VEM4000 Integrated Circuit Design.
Content: Overview of MOS and sub-micron technology, scaling and signal integrity, IC design techniques. CMOS cell design: device-level design constraints, gate design, parasitic transistor circuits, sequential circuits, mask level design. Layout considerations, design rules and mask level design. Circuit optimisation techniques. Timing issues in VLSI circuit design. Design of VLSI system sub-systems: Arithmetic and logic processing elements, adders, counters, I/Os, buffers, data path design and layout, etc. Chip floor planning. Design trade-offs-cost, power and performance.
Class Contact: 2.5 hours per week for one semester, comprising of one hour lecture and 1.5 hours of laboratory and project work.
Assessment: Laboratory exercises: 20%; Project: 20%; Final Examination: 60%.

Vep3000 Photonics A
Campus Footscray Park
Prerequisite(s): Completion of 2nd year of appropriate degree.
Class Contact: 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment: Assignments conducted throughout the semester 20%; Laboratory performance 20%; End of semester examination 60%.

Vep4000 Photonics B
Campus Footscray Park
Prerequisite(s): Vep3001 Photonics 1, Vep3002 Photonics 2.
Optical fibre waveguides and related devices: rigorous treatment of Maxwell's Equations for waveguides, boundary conditions and eigenvalue equations, planar dielectric waveguides and their modes, cylindrical dielectric waveguides and their modes, LP mode description, Gaussian approximation, dispersion in multimode and single mode fibres, normal mode theory of single mode fibre couplers. Design and operation of communication systems including those using dense wavelength division multiplexing.
Optical Fibre Sensors: Introduction and basic concepts, materials interactions in optical fibre sensors, fibre optic components, special optical fibres for sensors, interferometric sensors, fibre-optic gyroscope, intensity and wavelength-based sensors, multiplexed and distributed sensors, applications of fibre sensors, e.g. smart structures.
Class Contact: 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment: Assignments conducted throughout the semester 20%; Laboratory performance 20%; End of semester examination 60%.

Ves3000 Data Structures and Algorithm Analysis A
Campus Footscray Park
Prerequisite(s): Completed Second Year.
Content: Data Abstraction; Storage Structures; Collection Classes; Arrays; Linked lists; Iterators; Stacks, Queues, Recursion; Priority Queues; Trees; Heaps; Sorting algorithms; Searching algorithms; Tables; Hashing; File processing.
Class Contact: 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment: Class tests conducted throughout the semester 20%; Laboratory/learning project 20%; End of semester, open book examination 60%.

Ves4000 Programming Tools and Compilers B
Campus Footscray Park
Prerequisite(s): Completed Second Year.
A team project is undertaken to reinforce the principles taught in lectures.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

VES4100 COMPUTER SYSTEMS
Campus Footscray Park
Prerequisite(s) Completed Second Year.
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Class tests conducted throughout the semester 20%; Laboratory/team project 20%; End of semester, open book examination 60%.

VES4000 TELECOMMUNICATION A
Campus Footscray Park
Prerequisite(s) VET3000 Telecommunication A.
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory. 
Assessment Laboratory reports, assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VES4200 NETWORK SOFTWARE AND MANAGEMENT
Campus Footscray Park
Prerequisite(s) Completed Second Year.
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Class tests conducted throughout the semester 20%; Laboratory/team project 20%; End of semester, open book examination 60%.

VES4300 SOFTWARE ENGINEERING
Campus Footscray Park
Prerequisite(s) Completed Second Year.
Content Introduction to the engineering of quality software. The software development lifecycle model. System analysis, software requirements definition, specification, elicitation, analysis and modelling. Process specifications and data dictionary production. Software design process, principles and production. User interface design, information presentation and evaluation. The testing process, planning and strategies. Comparison of analysis and design techniques. Software reliability and reuse. Verification and validation. CASE tools and software engineering environments. Software project planning and estimating. A team project is undertaken to reinforce the principles taught in lectures.
Introduction to requirements
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory.
Assessment Class tests conducted throughout the semester 20%; Laboratory/team project 20%; End of semester, open book examination 60%.

VET4000 TELECOMMUNICATION B
Campus Footscray Park
Prerequisite(s) VET3000 Telecommunication A.
Data network topology: Point-to-point and Multi-point networks, Network access control methods: ALOHA, Slotted ALOHA, CSMA, Token ring, Token bus, FDDI, Wireless LAN, X25, Routing algorithms, ATM switches, Delay models in data networks., MM/1 queue, Data network design principles.
Class Contact 60 hours per semester comprising 48 hours of lecture/tutorial and 12 hours of laboratory.
Assessment Laboratory reports, assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4100 COMPUTER COMMUNICATIONS 1
Campus Footscray Park
Prerequisite(s) Nil.
Class Contact 30 hours per semester comprising 24 hours of lectures/tutorial and 6 hours of laboratory.
Assessment Class tests conducted throughout the semester 20%; Laboratory performance 20%; End of semester, open book examination 60%.

VET3000 TELECOMMUNICATION A
Campus Footscray Park
Prerequisite(s) VEG2002 Introduction to Engineering Systems.
VET4200 COMPUTER COMMUNICATIONS 2
Campus Footscray Park
Prerequisite(s) VET4100 Computer Communications 1.
Content Routing protocols, RIP, OSPF, and BGP. Multicast routing. Application layer. Concurrent clients and servers. BOOTP and DHCP. Domain name system. Telnet and Rlogin. Network virtual terminal. Socket interface. FTP and TFTP. SMTP. SNMP. HTTP. WWW.
Class Contact 30 hours per semester comprising 24 hours of lectures/tutorial and 6 hours of laboratory.
Assessment Class tests conducted throughout the semester 20%; Laboratory performance 20%; End of semester, open book examination 60%.

VET4300 DIGITAL COMMUNICATIONS
Campus Footscray Park
Prerequisite(s) VET3001 Telecommunication Engineering A, VET3002 Telecommunication Engineering B.
Class Contact 36 hours per semester comprising 24 hours of lecture/tutorial and 12 hours of laboratory works.
Assessment Assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4400 DIGITAL SIGNAL PROCESSING IN TELECOMMUNICATIONS 2
Campus Footscray Park
Prerequisite(s) VEG4100 Digital Signal Processing A.
Class Contact 36 hours per semester comprising 24 hours of lecture/tutorial and 12 hours of laboratory works.
Assessment Assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4500 SATELLITE COMMUNICATIONS
Campus Footscray Park
Prerequisite(s) VET3001 Telecommunication Engineering A, VET3002 Telecommunication Engineering B.
Class Contact 36 hours per semester comprising 24 hours of lecture/tutorial and 12 hours of laboratory works.
Assessment Assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4600 WIRELESS COMMUNICATIONS
Campus Footscray Park
Prerequisite(s) VET3001 Telecommunication Engineering A, VET3002 Telecommunication Engineering B.
Class Contact 36 hours per semester comprising 24 hours of lecture/tutorial and 12 hours of laboratory works.
Assessment Assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4700 COMMUNICATION SYSTEM AND NETWORK DESIGN
Campus Footscray Park
Prerequisite(s) VET3001 Telecommunication Engineering A, VET3002 Telecommunication Engineering B.
Content Design methodologies: Project definition, scoping, feasibility study, market analysis, business analysis, requirement analysis, system specifications, preliminary design, choice of technologies, detailed design, testing and commissioning, maintenance considerations. Design practice: Under guidance carry out a feasibility study an design of a typical communication system/network. Design Standards: Introduction to various international and national design standards.
Presentation: Oral and written presentation of the study and design in a manner expected in industry.
Class Contact 30 hours per semester comprising 15 hours of lectures/tutorial and 15 hours of practical design workshop.
Assessment Design assignments: 80%, Mid-semester test: 20%.

VET4800 MULTIMEDIA AND IP-BASED NETWORKS
Campus Footscray Park
Prerequisite(s) VEG2002 Introduction to Engineering Systems 2.

Class Contact: 30 hours per semester comprising 24 hours of lectures/tutorial and 6 hours of practical work.

Assessment: Semester Examination 70%; Mid-semester test: 20%; Assignment 10%.

VET6500 RESEARCH PROJECT
Campus: Footscray Park

Prerequisite(s): VET6510, VET6520

Content: Each student will undertake an individual research under the guidance of an academic staff on a suitable topic, over the duration of a semester. Lectures, seminars, and regular meetings will be held collectively to expose students to research related matters such as Research Methodology, Literature Reviews, Feasibility Studies, Experiment Design, Modelling and Simulation Techniques and Tools, Results Validation and Decision Making, Report Writing, Structured Documentation, and Scientific Presentation.

Required Reading: To be advised by the supervisor of the project.

Recommended Reading: To be advised by the supervisor of the project.

Class Contact: Twelve hours per week for one semester, comprising three hours per week group seminar, three hours per week (on average) individual meetings, discussions, etc. with the respective supervisor, and six hours per week independent study including laboratory and library activity.

Assessment: Regular seminar presentations (3 seminars, each of 20 min. duration) 30%; Final report (Approximately 25,000 words) 50%; Final presentation (duration 40 min.) 20%; Final report is to be examined by an external examiner (who could also be present at the final presentation).

VET6501 COMMUNICATION SYSTEM MODELING AND SIMULATION 1
Campus: Footscray Park

Prerequisite(s): Nil


Required Reading: To be advised by lecturer.

Recommended Reading: To be advised by lecturer.

Class Contact: Three hours per week for one semester.

Assessment: Preliminary assignments, 40%; final assignment, 60%.

VET6502 COMMUNICATION SYSTEM MODELING AND SIMULATION 2
Campus: Footscray Park

Prerequisite(s): Nil

Content: Introduction to OPNET and other industry standard simulation tools and their application in telecommunication systems modelling and simulation.

Required Reading: To be advised by lecturer.

Recommended Reading: To be advised by lecturer.

Class Contact: Three hours per week for one semester.

Assessment: Preliminary assignments, 40%; final assignment, 60%.

VET6510 COMMUNICATION THEORY
Campus: Footscray Park

Prerequisite(s): Nil


Class Contact: Three hours per week, comprising lectures, tutorials and seminars.

Assessment: Class test (Two Hours) 20%; Assignment (report not exceeding 5000 words) 20%; Final examination (Three Hours) 60%.

VET6511 DATA NETWORK ANALYSIS AND DESIGN
Campus: Footscray Park

Prerequisite(s): Nil


Class Contact: Three hours per week comprising two hour lecture and one hour tutorial/laboratory.

Assessment: Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT
Campus: Footscray Park

Prerequisite(s): Nil


Class Contact: Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.

Assessment: Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6520 DIGITAL COMMUNICATION PRINCIPLES
Campus: Footscray Park

Prerequisite(s): Nil


Multi-user Communications. Direct sequence CDMA. Frequency hopping CDMA, RAKE receivers.


Class Contact: Three hours per week, comprising lectures, tutorials and seminars.

Assessment: Class test (Two Hours) 20%; Assignment (report not exceeding 5000 words) 20%; Final examination (Three Hours) 60%.
VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
Campus Footscray Park
Prerequisite(s) Nil
Required Reading To be advised by the lecturer.
Recommended Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6522 TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING
Campus Footscray Park
Prerequisite(s) Nil
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
Campus Footscray Park
Prerequisite(s) Nil
Content This subject will provide a theoretical and practical understanding of wireless communication systems and the subsystems involved in them. It provides an overview of existing wireless systems with special reference to its hardware implementation. Subject content will include the following: Propagation modelling at UHF. Path loss, slow fading and fast fading. Okumura’s model. Delay spread, coherence bandwidth, and level crossing rate. Multipath propagation. Interference cancellation. Antennas. Antenna gain, radiation resistance, and phased array antennas. Base station antennas for cellular mobile systems. Low profile portable antennas. Modulation and coding for the mobile channel. FM, CPM, GMSK, and QPSK. Bit error rate and error flow. Channel equalisation. The effect of space, time and frequency diversity. Spread spectrum. CDMA, TDMA and FDMA.
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6532 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
Campus Footscray Park
Prerequisite(s) Nil
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6542 MOBILE AND PERSONAL COMMUNICATION SYSTEMS
Campus Footscray Park
Prerequisite(s) Nil
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

VET6550 MINOR PROJECT
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Content Each student will undertake an individual research on a topic allocated to him or her under the supervision of an academic staff over the duration of a semester. Regular meetings will be held between the students and their supervisors in the form of seminars where students will report their progress in the form of formal presentations. In addition, informal meetings between students and their supervisors will take place as and when required. In the process, the student will be exposed to research related matters such as Research Methodology, Literature Reviews, Feasibility Studies, Experiment Design, Modelling and Simulation Techniques and Tools, Results Analysis and Validation, Report Documentation and Presentation.
Required Reading To be advised by the supervisor of the project.
Recommended Reading To be advised by the supervisor of the project.
Class Contact Six hours per week for one semester, comprising three hours per week group seminar, and three hours per week (on average) individual meetings, discussions, etc. with respective supervisors.
Assessment Regular seminar presentations (3 seminars, each of 20 min duration), 30%. Final report (Approximately 12,000 words) 50%. Final presentation (of 30 min duration), 20%

VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Content This subject will provide an introduction to microwave electronic circuit design based around the Microwave transmission line structure. Students will be given small design projects to complete operating at the frequencies relevant to mobile communications (i.e. 0.9 to 3 Ghz). Extensive use will be made of Agilent's simulation and design package, ADS and other software packages in this course. Subject content: A review of basic transmission line theory. A review of microwave transmission structures. A discussion of corrections for microstrip discontinuities. A review of the Smith Chart. Consideration of matching requirements for small signal amplifiers. A review of matching techniques. Bias circuit design and power amplifier design. Passive RF Components.
Required Reading Gonzalez, G., 1984, Microwave Transistor Amplifiers – Analysis and Design, Prentice-Hall.
Class Contact Three hours per week for one semester comprising one hour lecture and two hour tutorial/laboratory.
Assessment Assignments: 60%; Examination/test: 40%. A pass in each component of assessment is required for a subject pass.

VET6552 COMPUTER NETWORKS AND NETWORKING SOFTWARE
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Recommended Reading Freer, J., Communications and Networks, 2nd edn, IEEE Press. Stevens, W.R., TCP/IP Illustrated; Vol 1,2 and 3, Addison Wesley.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6561 LOCAL AREA AND BROADBAND NETWORKS
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Required Reading To be advised by the lecturer.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 30%; Examination: 70%. A pass in each component of assessment is required for a subject pass.

VET6562 DIGITAL SIGNAL PROCESSING
Campus Footscray Park
Prerequisite(s) Nil
Co-requisite Nil
Required Reading To be advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact Three hours per week for one semester comprising two hour lecture and one hour tutorial/laboratory.
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VPP6511 FIBRE OPTIC COMMUNICATION SYSTEMS
Campus Footscray Park
Prerequisite(s) Eligibility for admission to Master's course.
Required Reading Palais, J.C. 2005, Fibre Optic Communications, 5th edn, Prentice-Hall, NJ.
Class Contact 36 hours lectures/tutorials/laboratories
Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each; Two laboratory reports (word length of each
not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.

VPP6512 ADVANCED FIBRE OPTICS
Campus Footscray Park
Prerequisite(s) VPP6511 Fibre Optic Communication Systems
Content Maxwell’s Equations for waveguides, boundary conditions and eigenvalue equations, planar dielectric waveguides and their modes, cylindrical dielectric waveguides and their modes, LP mode description, Gaussian approximation, dispersion in multimode and single mode fibres, normal mode theory of single mode fibre couplers. Role of optical amplifiers. Use of Bragg gratings for switching and dispersion compensation. Design and operation of current systems including those using dense wavelength division multiplexing.


Class Contact 36 hours lectures/tutorials.

Assessment Four assignments (each assignment report not exceeding 5000 words) 10% each, Final examination (Two Hours) 60%.

VPP6521 OPTICS AND LASERS
Campus Footscray Park
Prerequisite(s) Eligibility for admission to Master’s course.


Class Contact 36 hours lectures/tutorials/laboratories.

Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Two laboratory reports (word length of each not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.

VPP6522 DIGITAL COMMUNICATIONS OVER OPTICAL NETWORKS
Campus Footscray Park
Prerequisite(s) VPP6511 Fibre Optic Communication Systems
Content Fibre Optic transmission systems. Issues of chromatic dispersion, fibres and operational wavelengths, sources and receivers. LANs, Gigabit and 10 gigabit Ethernet, WANS, MANs, power budget. Protocols for modern communication systems – SONET/SDH: Architecture and protocols, speeds, architecture layers, network elements, rings, switching, restoration, and diversity. WDM and DWDM: special fibres, erbium-doped fibre amplifier (EDFA), tunable laser diode at 1550 nm. Practical issues in Optical Networking, non linearies, Raman amplifiers. Future trends.

Required Reading Goralski, W. 2001, Optical Networking & WDM, SPIE, Bellingham WA

Class Contact 36 hours lectures/tutorials/laboratories exercises.

Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Two laboratory reports (word length of each not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.

VPP6531 QUANTUM OPTICS
Campus Footscray Park
Prerequisite(s) Eligibility for admission to Master’s course.


Class Contact 36 hours lectures/tutorials/laboratories.

Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Two laboratory reports (word length of each not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.

VPP6532 OPTICAL FIBRE SENSORS
Campus Footscray Park
Prerequisite(s) VPP6511 FIBRE OPTIC COMMUNICATION SYSTEMS
Content Introduction and basic concepts, materials interactions in optical fibre sensors, fibre optic components, special optical fibres for sensors, interferometric sensors, fibre-optic gyroscope, intensity and wavelength-based sensors, multiplexed and distributed sensors. Fibre Bragg gratings for strain or temperature measurement. Applications of fibre sensors, e.g. smart structures.


Class Contact 36 hours lectures/tutorials/laboratories exercises.

Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Two laboratory reports (word length of each not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.

VPP6541 OPTICAL MATERIALS
Campus Footscray Park
Prerequisite(s) Eligibility for admission to Master’s course.
Content General Properties. Propagation of EM waves in dielectric media; models of the refractive index; dispersion, absorption and the refractive index; frequency dependence; scattering; cross-sections. Properties of Lens Materials Commonly used materials in the ultra-violet, visible and infrared regions; transmittance, dispersion and the refractive index; environmental properties; examples. Solid State Laser Materials Host materials: crystalline materials, semiconductors, active ions; colour centres. Non-linear Materials Electro-optic effect; magneto-optic effect. Thin Film Materials Substrates. Optical damage mechanisms; self-focusing; damage thresholds; specification of cosmetic surface quality of optical components.


Class Contact 36 hours lectures/tutorials/laboratories exercises.

Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Two laboratory reports (word length of each not exceeding 2500 words) 10% each; Final examination (Two Hours) 60%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact 36 hours lectures/tutorials.
Assessment Four assignments (each assignment report not exceeding 5000 words) 10% each.
Final examination (Two Hours) 60%.

VPP6542 DATA ACQUISITION
Campus Footscray Park
Prerequisite(s) Eligibility for admission to Master's course.
Content In this subject, students will learn advanced features of modern data acquisition and computer interfacing software, such as LabView. Students will be assigned projects that will involve the automation of an experiment, both in terms of the hardware and software requirements.
Recommended Reading Labview Manuals, National Instruments
Class Contact 36 hours including 24 hours of laboratory classes, 12 hours of lectures/tutorials.
Assessment Two assignments (each assignment report not exceeding 5000 words) 10% each. Laboratory project (report not exceeding 10,000 words) 80%.
 Below are details of courses offered by the School of Health Sciences in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses

### ASSOCIATE DEGREE IN DERMAL THERAPIES

**Course Code:** HADT

**Course Objectives**
The objectives include: Providing a further pathway of study for graduates of the diploma of beauty therapy with at least one year of industry work experience. This 3 semester online course will build on the theoretical knowledge gained at diploma level and enhance it to give students a more scientific understanding of some of the newer technologies in the industry. Students will gain a limited amount of clinical and practical experience via a small amount of burst mode study in Melbourne. Units will include, anatomy and physiology, skin disorders, psychology, research and scientific methodology, laser/IPL theory, chemical peels, microdermabrasion and others. This online program will also be a pathway to the more advanced Bachelor of Health Science (Dermal Therapies).

**Course Duration**
Two years

**Admission Requirements**
Admission requirements for the Associate Degree in Dermal Therapies will be successful completion of the Diploma of Beauty Therapy (WRB50105) and demonstration of recent work in the industry for at least two years equivalent full-time, and current employment in the industry. It is important that all intending students have acquired explicit knowledge gained via specific units at the Diploma level prior to entry. These units include BSBMKG404A, Forecast Market and Business Needs (or equivalent), BSBBSM404A Undertake business planning (or equivalent), WRBBS514A Provide superficial lymph drainage massage (or equivalent) along with one of the following elective streams: WRBSS503B Provide permanent epilation or WRBBS510A Provide the spa program.

**Course Structure**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year – Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Dermal Therapy Studies</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>BSBFLM512A Ensure Team Effectiveness</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>VBN094 Business Ethics and Corporate Governance</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>BSBMKG408A Conduct Market Research</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>BM02300 Career Planning and Development</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>First Year – Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal Health Science 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Dermal Health Science 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Manage Effective Workplace Relationships</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Dermal Workplace Practices</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Make Decisions Within a Legal Context</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Second Year – Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal Health Science 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>The Enterprise Project</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Business Integrated Learning</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>HLTKN06A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Second Year – Semester Two</strong> (select ONE of the following streams)**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal Laser Practice and Techniques 1</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>Dermal Laser Practice and Techniques 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Dermal Laser Practice and Techniques 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Medical Procedures Related to Dermal Therapy</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Business Stream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Communication</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>Innovation and Entrepreneurship</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Operations Management</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Entrepreneurial Business Management</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Training stream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAA40104</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### BACHELOR OF CHINESE MEDICINE (ACUPUNCTURE AND HERBS)

**Course Code:** HBAH

(For students commencing 2005 onwards)

**Course Objectives**
The aims of the course are to:
- provide students with detailed training in Chinese medical theory and practice, including acupuncture and Chinese herbal medicine;
- provide students with comprehensive Chinese medical skills in both acupuncture and Chinese herbal medicine, incorporating adjunctive approaches such as meditation, health enhancement and CM dietary modalities;
- ensure that students practise from Chinese medical theory, whilst integrating western medical information as appropriate, to ensure that graduates are safe and competent in the practice of Chinese Medicine;
- provide students with quality clinical experiences in hospitals and complementary health clinics from Year One of the program;
- provide students with the option of undertaking a clinical internship placement in an appropriate hospital setting in China or other countries; and
- provide students with opportunities for research and higher degree in Chinese Medicine on the completion of their undergraduate degree.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Admission Requirements
To qualify for admission to the course applicants must have satisfactorily completed the Victorian Certificate of Education (VCE), or equivalent with a study score of at least 20 in Units 3 and 4 English. It is also desirable, but not essential, that applicants have completed VCE level studies in biology, chemistry, psychology, or Asian studies.

Applicants who do not meet the normal admission requirements but who possess appropriate educational qualifications, or work experience which would enable them to successfully undertake the course, will be considered for admission.

Course Duration
The course is offered on a full-time basis over four years or part-time equivalent.

Course Location
This course if offered at the St Albans campus.

Clinical Placement
Students will be required to undergo a Victorian Police Check before commencing placement subjects. Police checks need to be conducted annually throughout the program. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation. Students will be required to show evidence of a current first aid in the workplace level 2 qualification whilst enrolled in the clinical practice unit.

Teaching clinics operate 50 weeks per year, and students will be required to attend clinical sessions on a rotation basis including outside of semester hours to maintain a public service and provide continuity of patient care.

Course Structure
All students will study both Acupuncture and Chinese Herbal Medicine throughout the four years of this integrated program.

Graduation Requirements
In order to be awarded a Bachelor of Chinese Medicine (Acupuncture and Herbs) degree, students must pass all components of assessment and satisfactorily complete all theoretical and clinical hurdle requirements to proficiency standards as specified in Ferrigno, P. (Compiler). (2005). School of Health Sciences Chinese Medicine Clinical Logbook [CD and manual]. Melbourne: Victoria University of Technology, School of Health Sciences, CM Unit; and Mathieson, L. (Producer). (2005). School of Health Sciences Chinese Medicine Clinical Practice demo CD (CD). Melbourne: Victoria University of Technology, School of Health Sciences, CM Unit. Students should presume that the content in those references constitutes Required Reading throughout the entire Chinese Medicine degree.

Professional Recognition
It is expected that graduates will meet the requirements of the Chinese Medicine Registration Board of Victoria and be eligible for membership of the major professional associations.

BACHELOR OF HEALTH SCIENCE – CLINICAL DERMAL THERAPIES

Course Code: HBCD

(This course is currently under review.)

Course Objectives
The aims of the course are to:

- provide an opportunity for qualified Beauty Therapists to establish and develop knowledge and skills in advanced dermal therapy treatments;
- instruct appropriately qualified practitioners in safe and effective therapies to supplement their existing dermal therapies practice and enhance the health of the client;
- extend and expand interpersonal skills in relation to the demands of practice;
- examine current developments in dermal therapy, advanced dermal therapy techniques and the application of these in practice;
- develop research perspectives within the context of Clinical Dermal Therapy and Clinical Dermal Therapy practice;
- provide a pathway to Degree level for Diploma of Beauty Therapy students;
- enhance career options for those Beauty Therapists working in the field;
- establish an educational benchmark for the practice of Clinical Dermal Therapies.
Admission Requirements
To qualify for admission to the course applicants must have completed the Diploma of Beauty Therapy, or equivalent, and have a minimum of one years' work experience in the field. Applicants may be required to attend an interview. International students are eligible to apply for entry to the course. Students will be required to undergo a Victoria Police check before commencing placement subjects. Police checks need to be conducted annually throughout the program. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation.

Course Duration
The course is offered over three semesters full-time or part-time equivalent.

Course Structure
Classes are conducted over three semesters each year, one day a week.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td>Semester Three</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHD3103 NUTRITION FOR HEALTH AND WELL-BEING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHD3104 GRADUATING SEMINAR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHD3200 CLINICAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHD3330 DERMAL TECHNIQUES 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Clinical Training
Teaching clinics operate 50 weeks per year, and students will be required to attend clinical sessions on a rotation basis including outside of semester hours to maintain a public service and provide continuity of patient care.

Website
www.staff.vu.edu.au/cdt

Graduation Requirements
In order to be awarded a Bachelor of Science – Clinical Dermal Therapies degree, students must pass all components of assessment where indicated and satisfactorily complete all theoretical and clinical hurdle requirements to proficiency standards as specified by local industry and government requirements.

Career Opportunities
Students will obtain knowledge and skills to equip them for professional careers in the growing field of Clinical Dermal Therapy. Graduates find career paths that allow them to perform advanced treatments such as laser on their clients and to work together with medical, paramedical and allied health professionals to enhance aesthetic outcomes in exciting areas like dermal plastic surgery and re-constructive surgery.

Professional Recognition
All graduates should be eligible for membership with the Australian Society of Dermal Clinicians.

BACHELOR OF SCIENCE – CLINICAL SCIENCES
Course Code: HBOS
(Subject to approval by the Osteopaths Registration Board)

Course Objectives
The aims of the course are to:
- prepare graduates for entry into the Master of Health Science – Osteopathy. Upon completion of the Masters degree, a graduate will be eligible to apply for registration as an osteopath;
- provide an education which contributes to the individual's personal, professional and intellectual growth;
- provide an education which contributes to the preparation of competent primary health care practitioners who, upon graduation from the Masters degree, are able to: apply osteopathic principles to formulate and prescribe suitable and safe management of patients; assess the health status of the patient, including physical, socio-economic and psychological factors; communicate with the patient and interact with other health care providers and advisers for the benefit of the patient.

Admission Requirements
To qualify for admission to the course applicants must have completed the Victorian Certificate of Education (after not more than two attempts), or equivalent, Units 3 and 4 in Chemistry and one of Physics or Mathematics (any), with a study score of at least 20 in English. Applicants over the age of 21 who have not attempted an approved year 12 course in the three years prior to application may apply to enter the course but are still required to meet the prerequisite study hurdles. Students will be required to undergo a Victoria Police check before commencing placement subjects. Police checks need to be conducted annually throughout the program. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation.

Course Structure

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year One</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHA1171 ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
</tr>
<tr>
<td>HHO1171 OSTEOPATHIC SCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHP1171 PHYSIOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>HHU1171 CLINICAL PRACTICUM 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>RMS1171 BIOCHEMISTRY 1 (OSTEOPATHY)</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>RBF1170 CELL STRUCTURE AND FUNCTION</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$363</td>
<td>$454</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHA1272 ANATOMY 2</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
</tr>
<tr>
<td>HHD1271 CLINICAL DIAGNOSIS &amp; MANAGEMENT 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>HHO1272 OSTEOPATHIC SCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHH1272 CLINICAL PRACTICUM 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>HHY1271 PATHOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>RMS1272 BIOCHEMISTRY (OSTEOPATHY) 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
</tr>
<tr>
<td>Year Two</td>
<td>Semester One</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>--------------</td>
<td>-------</td>
<td>---------</td>
<td>----------------</td>
</tr>
<tr>
<td>HHA2173</td>
<td>ANATOMY 3</td>
<td>8</td>
<td>0.0830</td>
<td>3</td>
<td>$564</td>
</tr>
<tr>
<td>HHC2171</td>
<td>BIOMECHANICS 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHD2172</td>
<td>CLINICAL DIAGNOSIS &amp; MANAGEMENT 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHQ2173</td>
<td>OSTEOPATHIC SCIENCE 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
</tr>
<tr>
<td>HHP2172</td>
<td>PHYSIOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHU2173</td>
<td>CLINICAL PRACTICUM 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
</tr>
<tr>
<td>HHY2172</td>
<td>PATHOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHA2274</td>
<td>ANATOMY 4</td>
<td>8</td>
<td>0.0830</td>
<td>3</td>
<td>$564</td>
</tr>
<tr>
<td>HHC2272</td>
<td>BIOMECHANICS 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHD2273</td>
<td>CLINICAL DIAGNOSIS &amp; MANAGEMENT 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHQ2274</td>
<td>OSTEOPATHIC SCIENCE 4</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
</tr>
<tr>
<td>HHP2273</td>
<td>PHYSIOLOGY 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
<tr>
<td>HHU2274</td>
<td>CLINICAL PRACTICUM 4</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
</tr>
<tr>
<td>HHY2273</td>
<td>PATHOLOGY 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Three</th>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHC3173</td>
<td>BIOMECHANICS 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>HHD3174</td>
<td>CLINICAL DIAGNOSIS &amp; MANAGEMENT 4</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>HHQ3175</td>
<td>OSTEOPATHIC SCIENCE 5</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHP3174</td>
<td>PHYSIOLOGY 4</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>HHS3171</td>
<td>PSYCHOLOGY &amp; SOCIAL SCIENCES 1</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>HHU3175</td>
<td>CLINICAL PRACTICUM 5</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHY3174</td>
<td>PATHOLOGY 4</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHA3275</td>
<td>ANATOMY 5</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
</tr>
<tr>
<td>HHC3274</td>
<td>BIOMECHANICS 4</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>HHD3270</td>
<td>PROFESSIONAL ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>1</td>
<td>$338</td>
<td>$423</td>
<td>$950</td>
</tr>
<tr>
<td>HHQ3276</td>
<td>OSTEOPATHIC SCIENCE 6</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHP3275</td>
<td>PHYSIOLOGY 5</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>HHS3272</td>
<td>PSYCHOLOGY &amp; SOCIAL SCIENCES 2</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>HHU3276</td>
<td>CLINICAL PRACTICUM 6</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
</tbody>
</table>

*Total Semester Hours for Unit
Check subject details with course co-ordinator.

Clinical Training
For registration as an Osteopath, students must have completed the minimum clinical subject attendance requirements over the combined Bachelor of Science – Clinical Sciences and Master of Health Science – Osteopathy courses. Completion of the Bachelor of Science – Clinical Sciences course alone does not make graduates eligible for registration as Osteopaths.

Teaching clinics operate 50 weeks per year, and students will be required to attend clinical sessions on a rotation basis including outside of semester hours to maintain a public service and provide continuity of patient care.

Clinic Website
http://www.vu.edu.au/Faculties/Health_Engineering_and_Science/Schools/Health_Sciences/Osteopathy

School Regulations
The following should be read in conjunction with the Faculty Regulations detailed earlier in this Handbook, and the University Statutes and Regulations.

Disciplinary Failure
A student who has been awarded a fail in a subject on disciplinary grounds, e.g. for cheating, may not enrol in any further subjects in any major sequence of which the subject forms a part without the permission of the Faculty Progress Committee.

Graduation Requirements
In order to be awarded a Bachelor of Science – Clinical Sciences, students must complete the hurdle clinical requirements.

Career Opportunities
Students will obtain knowledge and skills to equip them for professional careers as osteopaths in today's international market.

Professional Recognition
All graduates will be eligible for registration with the Osteopaths Registration Board of Victoria, and for registration as an osteopath in all other Australian states by mutual recognition with the Osteopaths Registration Board. Registered Osteopaths are also eligible for membership with other professional associations.

BACHELOR OF HEALTH SCIENCE – PARAMEDIC (ONE-YEAR CONVERSION)
Course Code: HBPA

Course Objectives
The aims of the course are to:
- provide a route to a degree qualification in paramedic practice for qualified paramedics who currently hold an Associate Diploma or equivalent;
- enhance the knowledge and skills of paramedics enabling them to function more effectively in their current practice;
- provide opportunities for paramedic practitioners to explore practice behaviours and attitudes in light of contemporary multicultural and multidisciplinary environments;
- stimulate paramedic practitioners to use problem solving skills when planning and implementing prehospital emergency care;
- produce graduate paramedics who can apply a research approach relevant to present practice;
- produce graduates who can examine current developments in paramedic practice and their implications for paramedics and paramedicine.

Admission Requirements
To qualify for admission to the course applicants must:
- have an Associate Diploma of Health Science (Ambulance Officer), Diploma of Health Science (Paramedic), or equivalent; or
- be eligible for registration as a paramedic by the relevant body within the applicant’s state or country of residence; and
• have a minimum of one-year post-qualification experience.

Course Duration
The course is offered over one year on a full-time basis or part-time equivalent, as demand requires. The course is offered on a full-time basis or part-time equivalent and is conducted completely via distance education using online teaching methodologies.

Course Structure

<table>
<thead>
<tr>
<th>Pre-2007 Year One Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3222 INTEGRATION OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3301 ISSUES IN PREHOSPITAL HEALTH SERVICE DELIVERY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3401 PREHOSPITAL ETHICAL AND LEGAL ISSUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB3122 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3211 INTEGRATION OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3501 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective</th>
<th>Credit</th>
<th>12 credit points</th>
</tr>
</thead>
</table>

| General Electives | Credit  | 12 credit points |

Student may choose an elective from any other higher education course offered by the University, subject to the approval of the Course Co-ordinator. Elective contact hours may be greater than three contact hours.

Year 1 Post 2007 Semester One

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB3121 ADVANCED PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3123 ADVANCED PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3124 PRACTITIONER HEALTH 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3125 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Year 1 Semester Two

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB3226 MAJOR INCIDENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3227 PARAMEDIC EVIDENCE BASED HEALTH CARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3228 ADVANCED PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3229 PARAMEDIC PRACTICUM</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Recognition of Prior Learning/Credits/Units of Study Exemptions Students are required to complete eight subjects to satisfy course requirements. No recognition of prior learning is permissible.

Course Regulations
The following should be read in conjunction with the Faculty Regulations detailed earlier in this Handbook, and the University Statutes and Regulations.

Unsatisfactory Progress
Students may be asked to show cause why they should not be excluded from the course if they fail to complete the course within three calendar years full-time or six years part-time.

BACHELOR OF HEALTH SCIENCE (PARAMEDIC)

Course Code: HBPX

Course Objectives
The aims of this course are to produce graduates who can:

• identify, evaluate and manage the physical, psychological and social needs of patients and members of the community undergoing paramedic assessment, treatment and transport, and apply problem solving skills when planning and implementing out-of-hospital care;

• perform paramedic skills and techniques within paramedic protocols and apply paramedic knowledge necessary for safe, efficient and effective practice within paramedic environments;

• interpret the paramedic needs of patients and members of the community within a holistic framework and apply an integrated holistic approach in paramedic practice;

• perform effectively and safely as an independent person and as a member of a health care team in paramedic environments;

• be sensitive to contemporary issues within socially and culturally diverse communities and predict and respond effectively to such issues when providing paramedic practice;

• examine current research and developments in paramedic practice and evaluate their implications for paramedics and the profession.

Course Duration
The course will be delivered via a three (3) year full-time on-campus mode rather than a two year full-time on-campus and one (1) year on-line. Admission Requirements To qualify for admission to the course applicants must normally have successfully completed the Victoria Certificate of Education (VCE), with Units 3 and 4 and a study score of at least 20 in English, or equivalent. Preference will be given to applicants who have successfully completed biology, physics or mathematics.

Applicants who do not meet the normal admission requirements but who possess appropriate educational qualifications, work or life experiences which would enable them to successfully undertake the course, will be considered for admission.

Students enrolled in the Bachelor of Health Science degree will be required to undergo a Victoria Police Check, a medical check and a physical capacity test before commencing placement subjects. Police checks need to be conducted annually throughout the program. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation.
Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>RAM1101 BIOSCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1113 PRE-HOSPITAL ETHICAL AND LEGAL ISSUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1111 PROFESSIONAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1112 PARAMEDIC CLINICAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RAM1211 BIOSCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1212 PROFESSIONAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1201 HEALTH ORGANISATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB1213 PARAMEDIC CLINICAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB2114 PARAMEDIC SCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB2115 MENTAL HEALTH AND ILLNESS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>AHE2111 PRACTITIONER HEALTH 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB2116 PARAMEDIC CLINICAL PRACTICE 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB2217 PARAMEDIC SCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RAM2218 PRACTITIONER HEALTH 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB2219 SPECIAL POPULATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB2220 PARAMEDIC CLINICAL PRACTICE 4</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

Year 3

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFB3121 ADVANCED PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3123 ADVANCED PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3124 PRACTITIONER HEALTH 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3125 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3226 MAJOR INCIDENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3227 PARAMEDIC EVIDENCE BASED HEALTH CARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3228 ADVANCED PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HFB3229 PARAMEDIC PRACTICUM</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

BACHELOR OF HEALTH SCIENCE (DERMAL THERAPIES) (I)

Course Code: HBDT

Course Objectives
The area of dermal therapies, although relatively new, is expanding at a considerable rate. Recent global and western trends indicate that the beauty and dermal therapies areas are second only to the areas of hospitality and foods. Not only is there an increasing demand for services, but an increasing demand by industry, including from recent VU graduates, to improve the quality and quantity of trained graduates in the field. In addition, the interdisciplinary links amongst dermal therapists and those in the established basic sciences and health disciplines are strengthening sufficiently that the number of research publications in refereed journals in dermal therapies is also increasing. All these factors will ensure that dermal therapies will continue to grow as a professional field in its own right.

The course in existence was originally developed about nine years ago. Over the years, technological advances in equipment and chemical products have been extensive and consumer demand (from an increasingly articulate client base for both services and training) is on the increase.

Course Duration
Including the TAFE it is a 4 year program. The Higher Ed. component is a 2.5 year program. It can be done full time and part time equivalent.

Admission Requirements
Entry requirements will be as per the requirements of the Diploma of Beauty Therapy International students and others required to demonstrate a basic level English proficiency are required to have an IELTS level commensurate with that of the Faculty for other undergraduate courses.

Course Structure

<table>
<thead>
<tr>
<th>Year 2 Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHD2204 DERMAL ANATOMY AND PHYSIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD2214 HEALTH RESEARCH STUDY PERSPECTIVES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD2224 INDUSTRY PRACTICUM 1</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

Year 2 Semester 3 (Summer Semester)

<table>
<thead>
<tr>
<th>Year 3 Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHD3114 WORKPLACE ISSUES IN DERMAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD3134 DERMAL SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD3124 INDUSTRY PRACTICUM 2</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

Year 3 Semester 2

<table>
<thead>
<tr>
<th>Year 4 Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHD3204 LASER SAFETY AND LIGHT BASED TREATMENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD3214 ELECTRICALLY BASED DERMAL TREATMENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD3224 DERMATOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD3234 PEELS PROCEDURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD4104 DERMAL CLINICAL PRACTICE 1</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$363</td>
<td>$454</td>
<td>$792</td>
</tr>
<tr>
<td>HHD4114 ADVANCED HEALTH RESEARCH PERSPECTIVES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD4124 LYMPHATIC PROCEDURES</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$363</td>
<td>$454</td>
<td>$792</td>
</tr>
<tr>
<td>HHD4134 LASER AND LIGHT PROCEDURES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD4144 INDEPENDENT RESEARCH 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
### GRADUATE DIPLOMA IN DERMAL THERAPIES

#### Course Code: HGCD

**Course Objectives**

- Advanced Treatments – the course will provide experience and a practice standard (practice standards are determined by the professional body the Australian Society of Dermal Clinicians) to dermal therapists who wish to seek employment performing more advanced dermal techniques such as clinical applications of machine based lymphatic treatments and other cosmetic injection based treatments such as dermal fillers. These advanced treatments are very popular, both as a service in industry and with past, current and future students wanting to perform them.
- A recent survey of past, current and prospective students found that approximately 94% want to complete this course to perform injectable treatments. All the advanced treatments listed in this course are non-permanent, therefore these treatments need to be provided on an ongoing basis. These forms of treatments are increasing in popularity and so is the need for people to perform them.
- Secondly, the course will provide a clear pathway into further postgraduate study for those wishing to undertake research degrees at Masters or PhD levels in the area.

#### Course Structure

<table>
<thead>
<tr>
<th>Year 4 Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHD4204 DERM CLINICAL PRACTICE 2</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$363</td>
<td>$454</td>
<td>$792</td>
</tr>
<tr>
<td>HHD4214 NUTRITION AND DERMAL THERAPIES</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$363</td>
<td>$454</td>
<td>$792</td>
</tr>
<tr>
<td>HHD4224 DERM CLINICAL PRACTICE 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD4234 PROFESSIONALISM IN DERMAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD4244 INDEPENDENT RESEARCH 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### GRADUATE DIPLOMA IN EMERGENCY MANAGEMENT

#### Course Code: HGMT

**Course Objectives**

- The course introduces students to the challenging and diverse field of emergency management. The focus will be on eight key areas of disaster / emergency management and will be delivered via online distance and flexible learning.
- The aim of the course is to provide the student with knowledge of principles of emergency / disaster planning, preparedness, response and recovery. The course also aims to develop the graduate attributes of problem solving in the context of emergency management, interoperability and communication in the event of a disaster / emergency situation and working as a professional in the field of emergency management.

#### Course Structure

Requirements for the Graduate Certificate in Emergency Management include the successful completion of any four of the following units:

<table>
<thead>
<tr>
<th>Year One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>HHD5135 SPECIALISED DERMAL ANATOMY AND PHYSIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHD5145 ADVANCED DERMAL APPLICATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD5155 PROFESSIONAL DERMAL ISSUES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD5165 ADVANCED CLINICAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester 2</td>
<td>HHD5235 DERMAL PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>HHD5245 ADVANCED DERMAL APPLICATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD5255 PROFESSIONAL DERMAL ISSUES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHD5265 ADVANCED CLINICAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### BACHELOR OF HEALTH SCIENCE (HONOURS) (I)

#### Course Code: HHHO

**Course Objectives**

- The course engages students in health research and places high importance upon understanding health and health care delivery within specific community and cultural parameters. Students in the program will be required to undertake research in an area of health related to their discipline, the health research interests of the School, University and Region. Academic staff managing the program will provide students with a range of specific research topics that place priority upon health in the Western region of Melbourne, rich in cultural and community diversity.
- Dialogue between the School of Health Sciences, Western Health and the Institute of Health and Diversity will ensure that student research is undertaken with a high level of cultural sensitivity.

---

163
Course Duration
One year full time or part time equivalent.

Admission Requirements
To qualify for admission to the Bachelor of Health Science (Honours) applicants must hold a degree in Health Science, or equivalent, with the average subject grade of ‘distinction’ or higher in their final year of undergraduate study. Applicants who do not meet the normal admission requirements may be admitted on the basis of exceptional experience, circumstances or achievements relevant to successfully undertaking the program. International students, and others required to demonstrate a basic level of English proficiency, are required to have an IELTS of at least 6.5, plus evidence that they have English proficiency in their respective health discipline. (These criteria have been deemed necessary in view of the coursework, research and thesis requirements of the honours year program)

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHH4111 RESEARCH METHODS IN HEALTH SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHH4121 PLANNING THE HEALTH HONOURS RESEARCH PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHH4131 HEALTH HONOURS THESIS</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHH4241 HEALTH HONOURS THESIS 2</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>HHH4251 HEALTH HONOURS THESIS 3</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

MASTER OF HEALTH SCIENCE (BY MINOR THESIS) (I)

Course Code: HMHM

This course will appeal to health practitioners from a variety of disciplines who have a desire to further studies via a minor thesis in their particular area of practice.

These areas may include:
- Ambulance Services;
- Community Health;
- Emergency Services;
- Health Sciences;
- Mental Health Workers;
- Paramedic Sciences;
- Sociology of Health;
- Tactile Therapies;
- Culture Issues in Health;
- Gerontology – Aged Care Services; and
- Women’s Health.

Course Objectives
The aims of the course are to:
- provide opportunities for students to extend their knowledge and enable ongoing critical analysis of primary health care;
- encourage students’ further investigation and reflection in a specific area of professional interest; and
- enhance students’ ability to apply research knowledge in a collegial environment.

Admission Requirements
To qualify for admission to the course applicants must have satisfactorily completed, at an average grade level of second class honours (H2), a Graduate Diploma in Health Sciences, or equivalent, as approved by the School of Health Sciences.

Course Duration
The course is offered over one year on a full-time basis or part-time equivalent.

Course Structure

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time HFR0001</td>
<td>32</td>
<td>0.3330</td>
<td>2</td>
<td>$1,934</td>
<td>$2,418</td>
<td>$4,219</td>
</tr>
<tr>
<td>or HFR0002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT1127 MINOR THESIS – FULLTIME</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT1137 MINOR THESIS – FULLTIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part-time HFR0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or HFR0002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and HHT1147 MINOR THESIS – PART-TIME</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>HHT1157 MINOR THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>HHT1158 MINOR THESIS PART-TIME</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>HHT1159 MINOR THESIS E PART-TIME</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
</tbody>
</table>

MASTER OF HEALTH SCIENCE – OSTEOPATHY (I)

Course Code: HMOS

Course Objectives
The aims of this course are to equip graduates with:
- the diagnostic skills required by a primary health care practitioner;
- the ability to assess the health status of the patient, including physical, socio-economic and psychological aspects;
- the ability to formulate and prescribe a suitable and safe treatment program;
The School of Health Sciences offers the Master of Health Science (by Research). Staff are able to supervise research projects in a broad range of health and related areas, some of which are listed below. It is suggested that applicants explore their research interests with the Course Co-ordinator and contact with appropriate staff will be facilitated. A thesis on an approved topic will be required.

**Areas of Specialisation**
- Acupuncture;
- Ambulance Services;
- Chinese Herbal Medicine;
- Clinical Practice;

**Course Code:** HRNS

**MASTER OF HEALTH SCIENCE (BY RESEARCH)**
• Complementary Therapies;
• Cultural Issues and Health;
• Emergency Services;
• Health Administration;
• Health Counselling;
• Health Education;
• Natural Medicine;
• Osteopathic Medicine;
• Rehabilitation;
• Traditional Chinese Medicine;
• Western Herbal Medicine;
• Women’s Health.

Course Duration
The course normally requires two years of full-time study or part-time equivalent.

Admission Requirements
To qualify for admission to the Master of Health Science (by Research) applicants must hold a degree in health science, or a related area, or equivalent, as approved by the School of Health Sciences.

Degree Requirements
The research thesis must be original work conducted under the supervision of the student advisor/s and with the approval of the Postgraduate Studies Committee of the University.

The thesis of the candidate will be examined externally by examiners of high academic standing in the area of the candidate’s thesis topic. Coursework may be required of candidates to further enhance the knowledge of a specific topic relevant to the field of study. Such coursework would run concurrent to the research.

BACHELOR OF HEALTH SCIENCE – PARAMEDIC (THREE-YEAR PRE-SERVICE)
Course Code: HXPA

Course Objectives
The aims of this course are to produce graduates who can:
• identify, evaluate and manage the physical, psychological and social needs of patients and members of the community undergoing paramedic assessment, treatment and transport, and apply problem solving skills when planning and implementing out-of-hospital care;
• perform paramedic skills and techniques within paramedic protocols and apply paramedic knowledge necessary for safe, efficient and effective practice within paramedic environments;
• interpret the paramedic needs of patients and members of the community within a holistic framework and apply an integrated holistic approach in paramedic practice;
• perform effectively and safely as an independent person and as a member of a health care team in paramedic environments;
• be sensitive to contemporary issues within socially and culturally diverse communities and predict and respond effectively to such issues when providing paramedic practice;
• examine current research and developments in paramedic practice and evaluate their implications for paramedics and the profession.

Admission Requirements
To qualify for admission to the course applicants must normally have successfully completed the Victoria Certificate of Education (VCE), with Units 3 and 4 and a study score of at least 20 in English, or equivalent. Preference will be given to applicants who have successfully completed biology, physics or mathematics. Applicants who do not meet the normal admission requirements but who possess appropriate educational qualifications, work or life experiences which would enable them to successfully undertake the course, will be considered for admission.

Students enrolled in the Bachelor of Health Science degree will be required to produce a current Victorian drivers’ licence, and undergo a Victorian Police Check, a medical check and a physical capacity test before commencing placement subjects. Police checks need to be conducted annually throughout the program. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation.

Course Duration
The course is offered on a full-time basis or part time equivalent. Clinical placements will be facilitated to suit individual needs of international students.

Course Structure

<table>
<thead>
<tr>
<th>Year Three</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3301 ISSUES IN PREHOSPITAL HEALTH SERVICE DELIVERY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3401 PREHOSPITAL ETHICAL AND LEGAL ISSUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3800 PARAMEDIC PROFESSIONAL WRITING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3122 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3211 INTEGRATION OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3501 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3700 PARAMEDIC INSTRUCTION AND MENTORING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

General Electives
Students may choose electives from any other higher education courses offered by the University, subjects to the approval of the Course Coordinator. Elective contact hours may be greater than three contact hours.

Course Regulations
The following should be read in conjunction with the Faculty Regulations detailed earlier in this handbook, and the University Statutes and Regulations.

Unsatisfactory Progress
Students may be asked to show cause why they should not be excluded from the course if they fail to complete the course within seven calendar years on a full-time basis or part-time equivalent.
Graduate Requirements
In order to be awarded the degree Bachelor of Health Science-Paramedic, students must attain proficiency standard as stipulated by local industry guidelines in all paramedic practical assessments and must obtain an Upgraded Pass in all practical subjects. In order to be enrolled in Year Three, students must have successfully completed Years One and Two, or equivalent.

Career Opportunities
Students will obtain skills, knowledge and personal attributes necessary for employment in an ambulance service. The skills, knowledge and attributes should also provide graduates with a competitive advantage for selection and promotion in the paramedicine career pathways.

Professional Recognition
All graduates are eligible to apply for membership of the Australian college of Ambulance Professionals.
SUBJECTS

Below are subject details for courses offered by the School of Health Sciences in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

HFB1111 PROFESSIONAL PRACTICE 1
Campus St Albans
Prerequisites Nil
Co-requisites
Learning Outcomes On successful completion of this unit, the student will:
1. Describe the development of emergency medical services systems
2. Describe current emergency medical service systems
3. Discuss the principals of professionalism, licensure, certification and registration
4. Describe and discuss the roles and responsibility of the paramedic
5. Describe medical direction for emergency services medical services.
6. Discuss the roles and responsibilities of professional organisations in pre-hospital care.
7. Describe and demonstrate effective interpersonal communication, including:
   - Approaches to communication
   - First impressions
   - Components of effective communication
   - Techniques for effective communication
   - Interviewing and documentation techniques
   - Gender based differences in communication
   - Problems in communication
8. Describe the psychosocial aspects of:
   - Death and dying
   - Medical roles
   - Grief and mourning
   - Talking to survivors
   - Acute grief preparation
   - When you know the patient
   - Sudden death
   - Anticipated death
   - Behaviour around the dead
9. Understanding special populations
   - Cultural and religious differences
   - Children
   - The older population
   - Gangs
   - Caring for disabled people
   - Prejudice
   - Attention seeking behaviours
10. The human component in emergency medical services
    - Recognising and understanding emotions in yourself and others
    - Developing self awareness
    - The effects or crisis on people
    - Relatives and bystanders
    - Respect and dignity
    - Essential elements of compassion
    - Understanding co-workers
    - The impact of emergency medical services on the family
11. Service orientation and the nature of routine
    - Coping with waiting
    - Pride and professionalism
    - Service orientation
    - Customer service and pursuit of quality
    - Conflict resolution
12. Stress and wellness
    - Stress and its management
    - Cumulative stress
    - Critical incident stress
    - Signs, symptoms, susceptibility, and overcoming stress
Content This unit will cover:
1. The human component in emergency medical services
2. Understanding emotions
3. Self-awareness
4. Understanding others
5. Effective interpersonal communication
6. Death and dying
7. Special populations and challenges
8. Service and orientation
9. Stress and wellness


Recommended Reading Demcoeour KB (1996) Streetsense communication, safety, and control 3rd edn. Redmond, WA

Class Contact Forty eight hours (48) over one 12-week semester, comprising of three (3) hours per week delivered as lectures and one (1) hour per week tutorial.

Assessment This unit has three (3) assessment items, a two (2) two thousand words (2000) assignments each worth 30% of the total mark (P1, P2, I1, I2, W1, W2, A2, A3, C1, C2, D2), a three (3) hour written end of semester examination worth 40% of the total mark (P1, P2, W2). To obtain a pass in this unit all components of assessment must be attempted and an aggregate mark of 50% must be attained.

HFB1112 PARAMEDIC CLINICAL PRACTICE 1
Campus Footscray Park
Prerequisites Nil
Co-requisites
Learning Outcomes On successful completion of this unit, the student will:
1. Apply principles of consent and confidentiality when obtaining and documenting a health history.
2. Demonstrate the process of history taking in order to obtain a comprehensive health history, using effective communication techniques.
3. Demonstrate the use of, and differentiate between, facilitation, reflection, clarification, empathetic responses, confrontation and interpretation.
4. Recognise scene hazards and potential hazards.
5. Describe methods of making a scene safe.
6. Relate the importance of accurate scene assessment and the importance of early and accurate communication.
7. Describe and demonstrate methods of assessing medical and trauma patients.
8. Describe and demonstrate methods of assessing the conscious and the apparently unconscious patient.
10. Describe and demonstrate the use of oxygen delivery systems and assisted ventilation to correct hypoxia in a hyperventilation or apnic patient.
11. Satisfactorily demonstrate cardiopulmonary resuscitation.
12. Demonstrate the ability to apply with body substance isolation guidelines.
13. Preform the assessment of a patient expected, or identified as having, infectious or communicable disease.
14. Demonstrate the proper disposal of contaminated wastes and supplies.
15. Demonstrate disinfection of patient care equipment.
16. Demonstrate correct manual handling techniques and the use of appropriate equipment to assist in the lifting and movement of patients in a variety of pre-hospital care scenarios.
17. Explain biomechanical principles in the lifting and manual handling of patients and patient care equipment.
18. Identify strategies to minimise manual handling injuries in the work place.
19. Demonstrate effective and safe patient lifting techniques using the following lifting aids:
   - Stretcher
   - Carry chair
   - Spine board
   - Scope stretcher
   - Slide board
   - Kendrick extrication device (KED)
20. Identify signs and symptoms of a fracture, sprain, strain, musculoskeletal tear/rupture.
21. Demonstrate the correct methods of splinting pelvic and limbs fractures.
22. Demonstrate the pre-hospital management of severe musculoskeletal injury.

23. Deliver paramedic clinical skills in an appropriate clinical setting.

**Contents**

This subject will cover the following topics:

- Injury prevention to the patient and the paramedic
- Therapeutic communication
- Biomechanics and kinetics
- History Taking
- Techniques of physical examination
- Patient assessment
- Clinical decision-making
- Assessment based management
- Communications, documentations
- Management of musculoskeletal injuries
- Basic life support
- Cardiopulmonary resuscitation
- Minimum of forty (40) hours placement in an appropriate clinical setting

**Required Reading**


Ambulance Services Victoria, Melbourne.


Ambulance Services Victoria.


**Recommended Reading**


**Class Contact**

Eighty-eight hours (88) over one 12-week semester, comprising of four (4) hour per week practical class and self directed learning utilising the paramedic interactive curriculum and forty (40) hours clinical placement.

**Assessment**

The grading system used in this subject will be satisfactory/unsatisfactory. Practical skills will be assessed using criterion referenced clinical skills assessment format. Students will be provided with clinical skills assessment (satisfactory/unsatisfactory) forms by the second week of semester (P1, P2, O1, O2, W1, A2, C1, C2, D1).

Knowledge, skills and values developed in this subject will be assessed through group discussion and based problem solving exercises (O1, O2, P1, P2).

Successful completion of a clinical logbook and reflective journal whilst on clinical placement in an appropriate clinical setting (P1, P2, O1, O2, W1, A2, C1, C2, D1).

**HFB1113 PRE-HOSPITAL ETHICAL AND LEGAL ISSUES**

**Campus** St Albans

**Prerequisites** Paramedic Clinical Practice 1

**Co-requisites**

**Learning Outcomes** Upon successful completion of this subject the student will:

1. Demonstrate an understanding of ethical and legal terminology and principles
2. Discuss how their own and other paramedics, when using paramedic practices may be influenced by ethical and legal issues.
3. Demonstrate an understanding of paramedic practices within the healthcare system.
4. Use an ethical framework to assist decision making.
5. Understand the impact of law on the role and activities of pre-hospital care providers.
6. Discuss issues relating to patient confidentiality.
7. Understand the rights and obligations between an individual paramedic and the employer.

**Contents**

The subject enables the students to explore ethical and legal issues and their implications for paramedics and paramedicine. Student’s experiences will be drawn upon to demonstrate and scrutinise their responses to common situations that occur in paramedic practice, which may cause ethical and legal dilemmas.

**Required Reading**


**Recommended Reading**


**HFB1201 HEALTH ORGANISATIONS**

**Campus** St Albans

**Prerequisites** Professional Practice 1

**Co-requisites**

**Learning Outcomes**

1. Understand basic research methodology and terminology;
2. Describe the main differences between qualitative and quantitative research;
3. Discuss the advantages and disadvantages of the different methodologies;
4. Have a beginning level of understanding of research design, establishing the rigour of a research process, methods of data collection and analysis and reporting on research data;
5. Retrieve appropriate articles for a literature review;
6. Conduct an in-depth critical appraisal of research articles;
7. Recognise the significance of consent, confidentiality and other ethical considerations in relation to research.

**Content**

- Australian health care system
- Health policy in the Australian context
- Structure and management of health organizations
- Division of labour/ scope of practice
- Management theories
- Health politics in the Australian context
- Access to health care
- Power and knowledge: impact on decision-making

**Required Reading**


**Recommended Reading**


**Class Contact** 48 hours over one 12-week semester comprising four (4) hours per week:

- 2 hours lectures/week
- 2 hours tutorials/week

**Assessment**

This subject will contain 3 assessment items. Students must attempt: one (1) 1500 word assignment 30% (P1, P2, I2, W2, A2), one (1) case study 1500 words 30% (P3, I2, O2, C2, D2) and one (1) 2-hour theory examination 40% (P2, W2). An aggregate mark of 50% must be achieved.
9. Discuss the prevalence and treatment of disabilities within the context of different socioeconomic, religious and cultural groups.

10. Discuss the concept of sociological, religious and cultural construction and moulding of what are traditionally considered 'biological' traits, such as gender and age.

11. Discuss and describe the patterns of mental illness within society, in the context of a sociological model.

12. Describe and define multiculturalism as it relates to the Australian society.

13. Describe the health trends and epidemiology of disease in Australian society as they pertain to different socioeconomic and cultural groups.

14. Discuss the concept of cultural footprints relevant to current sociological expectations.

15. Discuss how social conditioning and cultural expectations can create inequality within society, within the context of health and specific disease (such as HIV, disabilities and mental illness).

16. Discuss how social conditioning influences attitude, perspective and practices in service delivery.

17. Describe the health concepts/needs of the indigenous community in Australia.

18. Compare and contrast the health care needs and expectations of differing cultural and religious and minority groups.

19. Develop an understanding of the relationship between ethnicity and identity.

Content This subject will contain:

1. Past and present sociological perspectives of health and illness.
2. Biomedical models of health.
3. The role of the 'sick' person.
5. Cultural, social diversity and multiculturalism in Australia.
6. The role of culture in the provision of health care services.
7. Social construction of biological traits.
8. Death, dying and grief.
9. Mental Illness.
12. Minority groups.
14. Inequality and bias in health and illness.
15. Ethnicity and Identity.


Class Contact Forty eight (48) over one 12-week semester comprising of four (4) hours per week.

Assessment The grade allocation in this subject will be satisfactory/unsatisfactory. Practical skills will be assessed using criterion referenced clinical skills assessment format. Students will be provided clinical skills assessment forms by the end of the second week of semester.

Website dingo.vu.edu.au/~paramedics

To be advised by Lecturer.

HFB2100 PARAMEDIC PRACTICE 2

Campus St Albans, Off Campus

Prerequisite(s) HFB1203 Paramedic Practice 1; or equivalent.

Corequisite(s) HFB2101 Paramedic Clinical 2; or equivalent.

Content This subject continues to develop the students' understanding and practice of paramedic emergency management. A problem-oriented approach emphasizing application of knowledge guides students in trauma management and systems, environmental emergencies, introductory aeromedicine and major incident responses within specific medical specialties and out-of-hospital emergencies.

Topics in applied clinical pharmacology will reinforce paramedic emergency management. A problem-based learning activities.

Assessment Proficiency multi-station practical and theory examination (pass/fail) (hurdle requirement); portfolio (50%); examination (50%). To obtain an Ungraded Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (multi-station examination and portfolio) may be re-attempted once only. Proficiency standards must be obtained on any re-attempted multi-station examination. Maximum possible marks to be obtained on resubmission of any portfolio will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%. This subject is a hurdle requirement.

HFB2101 PARAMEDIC CLINICAL 2

Campus St Albans, Off Campus

Prerequisite(s) HFB1204 Paramedic Clinical 1; or equivalent.

Corequisite(s) HFB2100 Paramedic Practice 2; or equivalent.

Content This subject is designed to facilitate the application of theory and skills presented in HFB2100 Paramedic Practice 1. Students will participate in the delivery of health care in selected clinical settings and classroom laboratory practices. The clinical focus is on developing paramedic assessment, competency and management of patients in a variety of circumstances.

Required Reading To be advised by Lecturer.

Website dingo.vu.edu.au/~paramedics

Subject Hours A minimum of ten (10) hours per week for one semester or equivalent, comprising at least sixty (60) hours clinical
placement in the semester (hurdle requirement), lectures, tutorials, practical sessions and self-directed learning activities. Clinical placement needs to be flexible pending available clinical positions in hospitals, other medical facilities and ambulance services. Where possible, students will be notified at the beginning of the semester of their clinical arrangements.

**Assessment**
To obtain an Ungraded Pass, students must successfully complete the proficiency multi-station practical and theory examination (pass/fail; hurdle requirement); reflective journal (maximum 1500 words); four case studies; clinical log book; overall satisfactory appraisal from all placements (hurdle requirement). This subject is a hurdle requirement.

**HFB2102 FUNDAMENTALS OF PARAMEDICINE 3**
Campus St Albans, Off Campus, Online

**Prerequisite(s)**
HFB1205 Fundamentals of Paramedicine 2; or equivalent.

**Content**
The subject builds on the earlier Fundamentals of Paramedicine 1 and 2, and includes the anatomy and physiology of the lymphatic, digestive, reproductive and urinary systems to illustrate their relationships within a range of common and important acute and chronic illnesses. An overview of human nutrition, metabolism and temperature regulation is included. Topics may be interchangeable with those in HFB1101 Fundamentals of Paramedicine 1, HFB1205 Fundamentals of Paramedicine 2 and HFB2206 Fundamentals of Paramedicine 4 subjects. Topics will be related directly to paramedic care of the emergency patient.

**Required Reading** To be advised by Lecturer.

**Website**
dingo.vu.edu.au/~paramedics

**Subject Hours**
Six hours per week for one semester or equivalent, comprising lectures, tutorials, practical sessions and computer-based self-directed learning activities.

**Assessment**
Online test in two parts (20%); essay (1500 words) (30%); written examination (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (online test and essay) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

**HFB2103 PARAMEDIC SCIENCES 3**
Campus St Albans, Online

**Prerequisite(s)**
HFB1206 Paramedic Sciences 2; or equivalent.

**Content**
This subject introduces students to prescribed and over-the-counter drug treatments for endocrine and immunological disorders. Diagnosis and treatment of infections and inflammatory, neoplastic, and allergic conditions link the pharmacological and microbiological components of this subject. Topics studied in this subject may be interchangeable with those in HFB1102 Paramedicine Sciences 1, HFB1206 Paramedicine Sciences 2 and HFB2207 Paramedicine Sciences 4. Topics will be related directly to paramedic care.

**Required Reading** To be advised by Lecturer.

**Website**
dingo.vu.edu.au/~paramedics

**Subject Hours**
Four hours per week for one semester or equivalent, comprising lectures, tutorials, practical sessions and computer-based self-directed learning activities.

**Assessment**
Weekly workbook or online activities including one online test (Microbiology and Pharmacology combined) (30%); clinical review (1500 words) (20%); final written examination (50%). To obtain a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (weekly activities and clinical review) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

**HFB2114 PARAMEDIC SCIENCE 1**
Campus St Albans

**Prerequisites**
Bioscience 2

**Co-requisites**

**Learning Outcomes**
On successful completion of this unit, the student will:

1. Describe trauma systems in Australia.
2. Describe the scope of traumatic injuries and death.
3. Discuss the epidemiology of trauma.
4. Predict injury patterns based on laws of physics, motion, and transfer of force.
5. Describe injury patterns that should be suspected when injury occurs as a result of specific types of trauma.
6. Haemorrhage and shock:
7. Define shock.
8. Describe the factors necessary to achieve adequate tissue perfusion and oxygenation.
9. Describe the changes in the microcirculation during the progression of shock.
10. List and describe the causes and effects of hypovolemic, cardiogenic, neurogenic, anaphylactic, and septic shock.
11. Describe the pathophysiology, signs and symptoms associated with the progression through the stages of shock.
12. Outline the pre-hospital management of the patient in each type of shock based on pathophysiological findings and discuss how to integrate the assessment and management of the patient in shock.
13. Discuss and describe the past and current theories and the underlying pathophysiological principles behind the fluid resuscitation practices for traumatically injured patients.

**Soft tissue trauma:**
14. Describe the pathophysiological responses to soft tissue injury.
15. Describe the mechanism of injury and signs and symptoms of specific soft tissue injuries.
16. Outline the management principals of pre-hospital care of soft tissue injuries.
17. Describe the pre-hospital management of selected soft tissue injuries.
18. Discuss the factors that increase the potential for wound injuries.
19. Describe the incidence, patterns and sources of burn injury.
20. Describe the pathophysiological patterns to burn injury.
21. Classify burn injury according to depth, extent and severity based on established standards.
22. Describe the pre-hospital management of the patient who has established a burn injury.

**Head and facial trauma**
23. Describe the mechanism of injury, assessment and management of:
   - Facio-maxillary injuries; ear, eye, and dental injuries; neck trauma; scalp, cranium, nerve injury
24. Distinguish between different types of brain injuries based on pathophysiology and assessment findings.
26. Describe trauma scales used in the pre-hospital setting.
27. Describe the incidence, morbidity, mortality related to spinal injury.
29. Distinguish between certain types of spinal injury.
30. Describe pre-hospital assessment of spinal cord injury.
31. Identify pre-hospital management with the patient with traumatic and non-traumatic spinal cord injuries.

**Thoracic Trauma**
32. Discuss the factors and mechanism of injury associated with thoracic trauma.
33. Describe the mechanism of injury, signs and symptoms and management of skeletal injuries to the chest.
34. Describe the mechanism of injury, signs and symptoms and pre-hospital management of pulmonary trauma.
35. Describe the mechanism of injury, signs and symptoms, pre-hospital management of injuries to the heart and great vessels; esophageal and tracheobronchial injury; diaphragmatic rupture.
36. Describe mechanisms of injury, signs and symptoms, and complications associated with abdominal solid organ, hollow organ and pelvic organ injuries.
37. Describe the pre-hospital assessment priorities for a patient suspected of having an abdominal injury.
38. Outline the pre-hospital care of a patient with abdominal injury.
39. Describe the features of each class of musculoskeletal injury.
40. Describe the pre-hospital management principles for selected upper and lower extremity injuries.
41. Identify pre-hospital management priorities for open fractures, angular fractures and dislocations.
Content This subject will cover the following topics:
1. Trauma systems and mechanism of injury
2. Haemorrhage and shock
3. Soft tissue trauma
4. Burns
5. Head and facial trauma
6. Spinal Trauma
7. Thoracic trauma
8. Abdominal trauma
9. Musculoskeletal trauma


Class Contact Forty-eight hours (48) over one 12-week semester, comprising of four (4) hours per week of lectures. Self directed learning will be encouraged using the paramedic interactive curriculum and case study.

Assessment The grading system used in this subject will be pass/high distinction. This subject will include three (3) assessment items: a one (1) hour mid semester theory examination 30%, a two thousand (2000) word assignment 30% and a 3 hour end of semester theory examination 40%.

Successful completion of this subject requires all assessment items to be attempted and an aggregate mark of 50% to be obtained. Knowledge, skills and values developed in this subject will be assessed through group discussion and case based problem solving exercises.

HFB2115 MENTAL HEALTH AND ILLNESS
Campus St Albans
Prerequisites Paramedic Science 2

Co-requisites

Learning Outcomes Student will be able to:
1. Describe what is meant by mental health.
2. Explain how the biopsychosocial model relates to mental health.
3. Elucidate how good mental health may be promoted.
4. Use ideas from behavioural and cognitive psychology to explain the behaviours of themselves and others. This will include health destructive and health promoting behaviours.
5. Reflect on their own mental health and on that of others.
6. Discuss and describe the most prevalent mental disorders in Australia (depression, anxiety, substance misuse, bipolar disorder) and dementia.
7. Describe how psychosocial and lifestyle factors influence mental health.
8. Explain how ambulance paramedics should approach and assess patients with a behavioural emergency.
9. Explore and explain options as to how ambulance paramedics might manage a patient in a behavioural emergency.
10. Identify and describe the National and State legislation and ambulance service policies and regulations that apply to patients with a behavioural emergency.
11. Integrate this knowledge to participate effectively in relevant role-plays and scenarios.


Student will be directed to relevant sections of the mental health and illness literature.

Class Contact 4 hours of lectures per week


Exam (40%). I3, W3, A2.

HFB2116 PARAMEDIC CLINICAL PRACTICE 3
Campus St Albans
Prerequisites Paramedic Clinical Practice 2

Co-requisites

Learning Outcomes Upon the successful completion of this subject the student will:
1. Detail and discuss the various types of fluids used in the prehospital setting.
2. Describe and discuss the indications and contraindications of fluid replacement in the prehospital setting.
3. Accurately identify patients who would be indicated for fluid replacement therapy.
4. Describe and demonstrate the preparation and assembly of an intravenous fluid line.
5. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with an external haemorrhage.
6. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with an internal haemorrhage.
7. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with a soft tissue injury.
8. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with burns.
9. Demonstrate the application of the ‘Rule of Nines’ and ‘Lund and Brower’ methods of burns surface area assessment.
10. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with facial trauma.
11. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with a head injury.
12. Describe and demonstrate the application of a cervical collar.
13. Describe and demonstrate the use of appropriate extrication devices for patients presenting with a spinal injury, including spine boards, scoop stretchers, and the KED.
14. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with thoracic trauma.
15. Describe and demonstrate the appropriate procedure for decompression of a tension pneumothorax using a variety of methods.
16. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with abdominal injuries.
17. Describe and demonstrate the appropriate pre-hospital assessment and management of patients with limb fractures, both complicated and uncomplicated.
18. Describe and demonstrate the correct application of various splinting devices, including air splints, vacuum splints, SAM splints, and the Donway and/or HARE traction devices.
19. Describe, demonstrate and justify the administration of various pharmacological agents related to the management of traumatic injuries.
20. Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management.

Content This subject will contain:
1. Fluid resuscitation.
2. Haemorrhage control and shock management.
3. Assessment and management of soft tissue injuries.
4. Assessment and management of burns.
5. Assessment and management of head and facial trauma.
6. Assessment and management of spinal and back injuries.
7. Assessment and management of thoracic trauma.
8. Assessment and management of abdominal trauma.


Recommended Reading

Class Contact
Eighty eight (88) over one twelve-week semester comprising of four (4) hours per week practical class and self-directed learning utilising the Paramedic Interactive Curriculum, and forty (4) hours clinical placement in an appropriate clinical setting during the semester.

Assessment
The grade allocation in this subject will be satisfactory/unsatisfactory. Practical skills will be assessed using criterion referenced clinical skills assessment format. Students will be provided clinical skills assessment forms by the end of the second week of semester.

Knowledge skills and values developed in this subject will be assessed in final semester examinations which will be conducted in a scenario-based format. Students are required to complete a clinical log book and reflective journal whist on clinical placement. All assessment must be attempted.

HFB2204 PARAMEDIC PRACTICE 3
Campus St Albans, Off Campus
Prerequisite(s) HFB2100 Paramedic Practice 2; or equivalent.

Content
This subject continues development of students understanding and practice of paramedical emergency management. This subject has been designed to continue the study of knowledge using a problem-oriented approach. The introduction of skill development and knowledge has been specifically integrated to ensure students have an underlying knowledge and are able to apply skills to a particular situation. The framework of this subject will be based around medical specialties and out of hospital emergencies and will be related to emergency care of the elderly, obestics and midwifery, neonatal care, paediatrics, abdominal and reproductive emergencies. Students will be introduced to the principles of applied clinical pharmacology in the form of paramedical guidelines, drug administration, and management of these patients in emergency situations, in the home and during emergency medical transport. Students will also be introduced to clinical instruction and mentoring. To enhance student relationships, students will work with other students providing supervised self-directed learning activities. The introduction of this approach will further facilitate the need for individualised patient care. Topics in this subject may be interchanged with HFB1203 Paramedic Practice 1 or HFB2204 Paramedic Practice 3.

Required Reading
To be advised by lecturer.

Subject Hours
Six hours per week for one semester or off Campus equivalent comprising of lectures, tutorials, practical sessions and discussion and/or workbooks.

Assessment
Examination (50%), Portfolio (50%) and mastery exams (pass/fail). Normally to obtain a pass in the subject all components of assessment must be passed. To obtain a pass in the subject all components of assessment must be successfully completed. If resubmission of the assignment or a supplementary examination is required for this subject, the total mark available for the task will be a maximum of 50%, and the overall grade for the subject will be no higher than pass.

HFB2205 PARAMEDICAL INTERNSHIP
Campus St Albans, Off Campus
Prerequisite(s) HFB2101 Paramedic Clinical 2; or equivalent.
Corequisite(s) HFB2204 Paramedic Practice 3; or equivalent.

Content
This subject is designed to build on past clinical subjects and to place the student into actual paramedic practice. The subject aims to make students aware of the expectations of them in pre-hospital environments and acute medical settings. To further develop paramedic skills and an awareness of professional and ethical behaviours, students will be expected to practise primarily in the ambulance environment within selected clinical settings or in supervised classroom laboratory settings. Students will practise patient consultations and clinical practice under supervision. Clinical tutorials and case presentations will be emphasised and expanded upon clinically relevant material obtained during clinical placement.

Required Reading
To be advised by Lecturer.

Website
dingo.vu.edu.au/~paramedics

Subject Hours
A minimum of ten (10) hours per week for one semester or equivalent, comprising at least sixty (60) hours clinical placement in the semester (hurdle requirement), lectures, tutorials, practical sessions and self-directed learning activities. Clinical placement needs to be flexible pending available clinical positions in hospitals, other medical facilities and ambulance services. Where possible, students will be notified at the beginning of the semester of their clinical arrangements.

Assessment
To obtain an Ungraded Pass, students must successfully complete the proficiency multi-station practical and theory examination (pass/fail) (hurdle requirement); reflective journal (maximum 1500 words); four case studies; clinical log book; overall satisfactory appraisal from all placements (hurdle requirement). This subject is a hurdle requirement.

HFB2206 FUNDAMENTALS OF PARAMEDICINE 4
Campus St Albans, Off Campus, Online
Prerequisite(s) HFB2102 Fundamentals of Paramedic 3; or equivalent.

Content
This subject furthers the understanding of principles and diseases introduced in earlier paramedic subjects. Topics include the anatomy and physiology of the special senses; fluids, electrolytes and acid-base balance; and pregnancy and human development. The impacts of trauma and fluid and electrolytic imbalances on the body and the pathophysiological basis of pain and shock are presented. Fundamental differences between paediatric and adult care are highlighted. Students will study the acute paediatric onset of illnesses affecting the cerebral, respiratory, cardiovascular and other systems. Causes and prevention of paediatric trauma will be introduced and extended into its management in a prehospital setting. Emotional effects on parents, paramedics and bystanders will also be discussed. Topics may be interchanged with those in HFB1101 Fundamentals of Paramedicine 1, HFB1204 Fundamentals of Paramedicine 2 and HFB2104 Fundamentals of Paramedicine 3. Topics will be related directly to paramedic care of the emergency patient.

Required Reading
To be advised by Lecturer.

Website
dingo.vu.edu.au/~paramedics

Subject Hours
Four hours per week for one semester or equivalent, comprising lectures, tutorials, practical sessions and computer-based self-directed learning activities.

Assessment
Online test given in two parts (20%); essay (1500 words) (30%); written examination (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (online test and essay) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HFB2207 PARAMEDIC SCIENCES 4
Campus St Albans, Online
Prerequisite(s) HFB2103 Paramedic Sciences 3; or equivalent.

Content
This subject develops the students' knowledge on drugs used for CNS and psychiatric conditions and extends knowledge on fluid imbalances. Attitudes towards recreational and prescribed drugs are explored. Principles of microbiology with reference to sterilisation and disinfection, infection control and antibiotic treatment of microorganisms and nosocomial infections are linked to public health issues later in the course. Topics studied in this subject may be interchangeable with those in HFB1102 Paramedic Sciences 1, HFB1206 Paramedic Sciences 2 and HFB2103 Paramedic Sciences 3. Topics will be related directly to paramedic care of the emergency patient.

Required Reading
To be advised by Lecturer.

Website
dingo.vu.edu.au/~paramedics

Subject Hours
Four hours per week for one semester or equivalent, comprising lectures, tutorials, practical sessions and self-directed learning activities.

Assessment
Clinical review (1500 words) (20%); essay (1500 words) (30%); final written examination (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (clinical review and essay) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HFB2217 PARAMEDIC SCIENCE 2
Campus St Albans
Prerequisite(s) Paramedic Science 1

Co-requisites
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Learning Outcomes On successful completion of this unit, the student will:

Cardiology:
1. Describe the pathophysiology, signs and symptoms, and pre-hospital management of the patient with acute myocardial infarction.
2. Distinguish between acute and chronic renal failure.
3. Discuss general pre-hospital management for the patient with a respiratory emergency.

Haematological disorders:
4. Discuss the pathophysiology and signs and symptoms of haematological disorders including: anaemia, haemophilia, Hodgkin's disease, Lymphoma, Polycythaemia, sickle cell disease.
5. Outline general assessment of patients with haematological disorders.

Gynaecological disorders:
6. Describe the pathophysiology of selected non-traumatic causes of abdominal pain in females; pelvic inflammatory disease, ruptured ovarian cyst, cystitis, dysmenorrhea, endometriosis, ectopic pregnancy, and vaginal bleeding.
7. Describe the pathophysiology of selected traumatic causes of abdominal pain in females; vaginal bleeding and sexual assault.
8. Outline the pre-hospital assessment and management of the female with abdominal pain.
9. Outline specific management and treatment of the patient who has been sexually assaulted.
10. Describe specific pre-hospital measures to preserve evidence in sexual assault cases.

Obstetrics:
11. Describe the organisation and function of the specialised structures of pregnancy.
12. Outline foetal development from ovulation to birth.
13. Explain normal maternal physiological changes that occur during pregnancy and how the influence pre-hospital patient care and transportation.
14. Describe appropriate information to be elicited during the obstetrical patient's history.
15. Describe specific techniques for assessment of the pregnant patient.
16. Describe the assessment and management of the pregnant patient in the pre-hospital setting.

Geriatrics:
17. Discuss the implications of pre-hospital care in the specific obstetric emergencies including: trauma to the foetus and mother, pre-eclampsia, eclampsia, and vaginal bleeding in pregnancy.
18. Outline the physiological changes that occur during labour.
19. Explain the physiology of the aging process as it relates to major body systems and hemorrhage.
20. Describe general principals specific to older adults.
21. Describe the pathophysiology, assessment and management of specific illnesses in geriatric patients.
22. Discuss pre-hospital assessment and management of depression and suicide in the older adult.
23. Discuss effects of drug toxicity in the older adult.
24. Describe the epidemiology, assessment and management of trauma, environmental emergencies and abuse in the geriatric patients.

Paediatrics:
25. Describe general principals specific to paediatrics.
26. Describe the pathophysiology, assessment and management of specific illnesses in paediatric patients.
27. Describe the pathophysiology, assessment and management of traumatic injuries and shock in paediatric patients.
28. Discuss and describe the psychosocial and pathophysiological aspects of non-accidental trauma.
29. Discuss and describe the psychosocial and pathophysiological aspects of SIDS.

Content This subject will cover the following topics:
1. Cardiology and acute coronary syndromes.
2. Pulmonary emergencies.
4. Endocrine emergencies.


Class Contact Forty-eight hours (48) over one 12-week semester, comprising of four (4) hours per week of lectures. Self directed learning will be encouraged using the paramedic interactive curriculum and case study.
Assessment The grading system used in this subject will be pass/high distinction. This subject will include three (3) assessment items: a one (1) hour mid semester theory examination 30%, a two thousand (2000) word assignment 30% and a 3 hour end of semester theory examination 40%.
Successful completion of this subject requires all assessment items to be attempted and an aggregate mark of 50% to be obtained.

HFB2219 SPECIAL POPULATIONS
Campus St Albans
Prerequisites Paramedic Science 1
Co-requisites

Learning Outcomes On successful completion of this unit, the student will:

Urology and urinary disorders:
1. Describe the pathophysiology, signs and symptoms, and pre-hospital management of the patient with urinary retention, urinary tract infections, pyelonephritis and urinary calculus.
2. Distinguish between acute and chronic renal failure.
3. Discuss general pre-hospital management for the patient with an urinary disorder.

Haematological disorders:
4. Discuss the pathophysiology and signs and symptoms of haematological disorders including: anaemia, haemophilia, Hodgkin's disease, Lymphoma, Polycythaemia, sickle cell disease.
5. Outline general assessment of patients with haematological disorders.

Gynaecological disorders:
6. Describe the pathophysiology of selected non-traumatic causes of abdominal pain in females; pelvic inflammatory disease, ruptured ovarian cyst, cystitis, dysmenorrhea, endometriosis, ectopic pregnancy, and vaginal bleeding.
7. Describe the pathophysiology of selected traumatic causes of abdominal pain in females; vaginal bleeding and sexual assault.
8. Outline the pre-hospital assessment and management of the female with abdominal pain.
9. Outline specific management and treatment of the patient who has been sexually assaulted.
10. Describe specific pre-hospital measures to preserve evidence in sexual assault cases.

Obstetrics:
11. Describe the organisation and function of the specialised structures of pregnancy.
12. Outline foetal development from ovulation to birth.
13. Explain normal maternal physiological changes that occur during pregnancy and how the influence pre-hospital patient care and transportation.
14. Describe appropriate information to be elicited during the obstetrical patient's history.
15. Describe specific techniques for assessment of the pregnant patient.
16. Describe the assessment and management of the pregnant patient in the pre-hospital setting.

Geriatrics:
17. Discuss the implications of pre-hospital care in the specific obstetric emergencies including: trauma to the foetus and mother, pre-eclampsia, eclampsia, and vaginal bleeding in pregnancy.
18. Outline the physiological changes that occur during labour.
19. Explain the physiology of the aging process as it relates to major body systems and hemorrhage.
20. Describe general principals specific to older adults.
21. Describe the pathophysiology, assessment and management of specific illnesses in geriatric patients.
22. Discuss pre-hospital assessment and management of depression and suicide in the older adult.
23. Discuss effects of drug toxicity in the older adult.
24. Describe the epidemiology, assessment and management of trauma, environmental emergencies and abuse in the geriatric patients.

Paediatrics:
25. Describe general principals specific to paediatrics.
26. Describe the pathophysiology, assessment and management of specific illnesses in paediatric patients.
27. Describe the pathophysiology, assessment and management of traumatic injuries and shock in paediatric patients.
28. Discuss and describe the psychosocial and pathophysiological aspects of non-accidental trauma.
29. Discuss and describe the psychosocial and pathophysiological aspects of SIDS.

Content This subject will cover the following topics:
1. Urology and Urinary disorders.
2. Haematological disorders.
3. Gynaecology and genealogical disorders.
4. Obstetrics.
5. Geriatrics.
6. Paediatrics.

Successful completion of this subject requires all assessment items to be attempted and an aggregate mark of 50% to be obtained.

Knowledge, skills and values developed in this subject will be assessed through group discussion and case-based problem solving exercises.

**HFB2220 PARAMEDIC CLINICAL PRACTICE 4**

**Campus** St Albans

**Prerequisites** Paramedic Clinical Practice 3

**Co-requisites**

**Learning Outcomes**

Upon the successful completion of this subject the student will:

1. Describe and demonstrate the appropriate pre-hospital assessment and management of patients presenting with selected cardiovascular disorders, including the acute coronary syndromes
2. Demonstrate the correct application and usage of a variety of cardiac monitoring devices.
3. Demonstrate the systematic analysis of a three lead ECG rhythm strip.
4. Describe and demonstrate the appropriate pre-hospital assessment and management of patients presenting with selected respiratory disorders.
5. Demonstrate, in a simulated environment, the successful delivery of a child, in a variety of presentations.
6. Describe and demonstrate the systematic assessment, management and discharge of patients with an endocrine emergency.
7. Describe, demonstrate and justify the administration of various pharmacological agents related to the management of cardiac, respiratory, neurological and endocrine disorders.
8. Describe and demonstrate the appropriate pre-hospital assessment and management of female patients with reproductive emergencies.
9. Describe and demonstrate management of the neonate, including the correct application of the APGAR score post delivery.
10. Describe and demonstrate management of the neonate, including the correct application of the APGAR score post delivery.
11. Describe and demonstrate the appropriate pre-hospital assessment and management of paediatric emergencies.
12. Demonstrate the assessment and management of the pre and postpartum patient in both the emergency and non-emergency state.
13. Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management.

**Content**

This subject will contain:

1. Cardiovascular emergencies, including the acute coronary syndromes
2. Respiratory emergencies
3. Neurological emergencies
4. Endocrine emergencies
5. Female reproductive system emergencies
6. Practical children
7. Care of the neonate and paediatric emergencies
8. Management of the pre and postpartum patient

**Required Reading**


**Class Contact**

Forty-eight hours (48) over one 12-week semester, comprising of four (4) hours per week practical class and self-directed learning utilising the Paramedic Interactive Curriculum, and forty (4) hours clinical placement in an appropriate clinical setting during the semester.

**Assessment**

The grading system used in this subject will be pass/fail. This subject will include one (1) assessment items: a three thousand (3000) word assignment 50% and a 3 hour end of semester theory examination 50%.

Successful completion of this subject requires all assessment items to be attempted and an aggregate mark of 50% to be obtained.

Knowledge, skills and values developed in this subject will be assessed through group discussion and case-based problem solving exercises.

**HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1**

**Campus** St Albans, Off Campus, Online

**Prerequisite(s)** Successful completion of Years One and Two; or equivalents.

**Content**

This subject challenges students to analyse their present practice by examining the principles of intervention for the acutely ill or injured person. An integral part of this subject will be the development of students’ health assessment and practice skills necessary to care for the acutely ill or injured person and the adoption of those skills to improve and extend current practice. Integration of material from basic and paramedic sciences, applied clinical sciences, paramedic clinical practice and professional issues will be incorporated throughout the subject.

**Required Reading**

To be advised by Lecturer.

**Recommended Reading**

To be advised by Lecturer.

**Website**

webct.vu.edu.au/

**Subject Hours**

Four hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.

**Assessment**

Portfolio (100%) To obtain at least a Pass in the subject, normally the assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HFB3121 ADVANCED PARAMEDIC PRACTICE 1**

**Campus** St Albans, Internet

**Prerequisites**

Paramedic Science 2

**Learning Outcomes**

On successful completion of this unit, the student will:

1. Correlate pathophysiological concepts and assessment findings when patients experience acute health emergencies relating to alterations in perfusion and oxygenation.
2. Select and use diagnostic tests that aim to support or validate hypotheses regarding the health emergency.
3. Outline the appropriate assessment of a patient who may be experiencing a cardiovascular disorder.
4. Describe ECG monitoring techniques that permit electrocardiogram interpretation.
5. Describe the sequence of steps in electrocardiogram interpretation.
6. When shown an electrocardiogram tracing, identify the rhythm, site of origin, possible causes, clinical significance, and pre-hospital management.
7. Identify dysrhythmias of the/originating in the sinus node, atria, atrioventricular junction, atrioventricular blocks, ventricular, bundle branch and fascicular blocks.
8. Describe the pre-hospital assessment and management of patients with selected cardiovascular disorders based on knowledge of the pathophysiology of the illness.
9. List indications, contraindications, and pre-hospital considerations when using selected cardiovascular interventions including; manual cardioversion, synchronised cardioversion, transcutaneous cardiac pacing, thrombolytic and reperfusion therapies, implanted defibrillation devices and cardiac marker assays.
10. Describe the method for taking 12-lead electrocardiogram tracings.
11. Analyse and interpret 12-lead electrocardiograms.
12. Integrate 12-lead electrocardiogram analysis and interpretation to determine appropriate pre-hospital assessment and management of the patient with a suspected acute myocardial infarction.
13. List indications, contraindications, dose, precautions, adverse effects, mechanism of action of pharmacological agents used to manage cardiovascular disorders.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

14. Identify appropriate actions to take in the pre-hospital setting to terminate resuscitation.

Airway Management and Ventilation:
15. Discuss the assessment and management of medical or traumatic obstruction of the airway.

16. Describe the indications, contraindications, complications, pre-hospital precautions for advanced pre-hospital airway management and protection including: tracheal intubation, rapid sequence induction, needle cricothyroidotomy, cricothyroidotomy, lighted stylet intubation, nasogastric intubation, orogastric intubation, and mechanical and transport ventilation.

17. Demonstrate the correct and appropriate use of advanced pre-hospital airway management and protection including: tracheal intubation, rapid sequence induction, needle cricothyroidotomy, cricothyroidotomy, lighted stylet intubation, nasogastric intubation, orogastric intubation, and mechanical and transport ventilation.

18. Demonstrate the correct and appropriate use of advanced ventilation-perfusion diagnostic technology including pulse oximetry, end-tidal carbon monoxide detection, and peak flow testing.

19. Describe and demonstrate knowledge and skills for the administration of pharmacological agents of sedation and paralysis.

Anxiety and Anaphylaxis
20. Describe the antigen anti body response

21. Differentiate between an allergic reaction and a normal immune response.

22. Describe signs and symptoms and management of local allergic reactions based on an understanding of the pathophysiology associated with this condition.

23. Identify allergens associated with anaphylaxis.

24. Describe the pathophysiology, signs and symptoms, and management of anaphylaxis

Content: This subject will cover the following topics:
1. Cardiology
2. Advanced airway management
3. Allergies and anaphylaxis


Class Contact: 48 hours over one 12-week semester comprising four (4) hours per week: 2 hours on-line lecturers/week 2 hours on-line tutorials week

Assessment: The grading system used in this subject will be pass/high distinction. This subject will include three (3) assessment items: a one (1) hour mid semester theory examination 30%, a two thousand (2000) word assignment 30% and a 3 hour end of semester theory examination 40%. Successful completion of this subject requires all assessment items to be attempted and an aggregate mark of 50% to be obtained. Knowledge, skills and values developed in this subject will be assessed through group discussion and cased based problem solving exercises.

HFB3122 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 2

Campus: St Albans, Off Campus, Online
Prerequisite(s): Successful completion of Years One and Two; or equivalents.

Content: This subject challenges students to analyse their present practice by examining the principles of intervention for the acutely ill or injured person. An integral part of this subject is the development of students’ understanding of electrocardiology and pharmacology, and their ability to apply principles in electrocardiology and pharmacology to their present practice. Integration of material from basic and paramedic sciences, applied clinical sciences, paramedic clinical practice and professional issues will be incorporated throughout this subject.

Required Reading: To be advised by Lecturer.

Recommended Reading: To be advised by Lecturer.

Website: webct.vu.edu.au/

Subject Hours: Four hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.

Assessment: Portfolio including contribution to online discussions (500-800 words each) (100%). To obtain at least a Pass in the subject, normally the assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HFB3123 ADVANCED PHARMACOLOGY

Campus: St Albans, Internet

Prerequisites: Paramedic Science 2

Learning Outcomes: On successful completion of this unit, the student will:
1. Describe the clinical indications for, adverse effects of adrenergic and cholinergic agonists and antagonists.

2. Describe the distribution and function of selected drug group receptors.

3. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of narcotic analgesics and non-narcotic analgesics.

4. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of anxiolytic, hypnotic, and anti-psychotic drugs.

5. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of selected cardiovascular drugs.

6. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of selected drugs that act on the respiratory system.

7. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of selected local anaesthetic drugs.

8. Understand the role of prostaglandins in the inflammatory response.

9. Contrast the actions of depolarising and non-depolarising neuromuscular blocking agents.

10. State the rationale for the use of neuromuscular blocking agents in anaesthesia.

11. Identify suitable agents for rapid sequence induction.

12. Describe the actions of selected drugs used to treat heart failure.

13. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of anti-convulsant agents.

14. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of antipypretics, anti-inflammatory and analgesic drugs.

15. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of fluids and blood products in the treatment of cardiovascular instability.

16. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of selected anti-emetic agents.

17. Discuss the indications, uses, mechanism of action, contraindications and adverse effects of selected anti-biotic, anti-viral and anti-microbial agents.

Content: This subject will cover the following topics:
1. Adrenergic and cholinergic pharmacology

2. Histamine and antihistamine agents

3. Antipsychotic drugs

4. Anxiolytics, hypnotics, and antidepressant drugs

5. Anticonvulsants, and muscle relaxants

6. Narcotic analgesics and antagonists

7. Antiinflammatory, antipypretic, and analgesic drugs

8. Local analgesia

9. Antiarrhythmic and anginal drugs

10. Antihypertensive drugs

11. Anticoagulant, fibrinolytic and anti-platelet agents

12. Diuretic agents

13. Bronchodilators and respiratory agents

14. Antiemetic agents


Class Contact: 48 hours over one 12-week semester comprising four (4) hours per week: 2 hours on-line lecturers/week 2 hours on-line tutorials week

Assessment: The grading system used in this subject will be pass/high distinction. This subject will include three (3) assessment items: a one
HFB3124 PRACTITIONER HEALTH 3
Campus St Albans, Internet
Prerequisites Mental Health and Illness
Learning Outcomes Students who successfully complete this subject will be able to:
1. Describe the biopsychosocial model of health.
2. Explain the concept of social capital and how it relates to the biopsychosocial model of health.
3. Describe the mental health profile of people working in the ambulance industry.
4. Compare the mental health profile of people working in the ambulance industry with that of the general Australian population.
5. Explain the effects of shiftwork on sleep.
6. Integrate concepts and techniques drawn from cognitive-behavioural psychology to improve sleep.
7. Identify the mental health disorders of concern to the ambulance industry (including depression, anxiety and substance misuse).
8. Integrate knowledge of the biopsychosocial model of health with ways of describing and dealing with mental health issues.
9. Discuss concerns about suicide.
10. Develop an understanding of the stress process and techniques or tactics for dealing with stress including those used by ambulance paramedics.

Content
Biopsychosocial model of health. Concept of social capital and how it relates to the biopsychosocial model of health. How the biopsychosocial model of health can be utilized to discuss and understand mental health issues. Mental health profile of ambulance paramedics and the Australian population. Managing the effects of shiftwork on sleep. Mental health issues of concern to the ambulance industry. Suicide. Stress processes and how the stress process might be managed.

Required Reading
There are no books published that deal specifically or exclusively with the issue of paramedic mental health. A relevant section from a book prescribed for other subjects is indicated below. Sanders, M. J. (2005) Mosby’s paramedic textbook (3rd edn). Elsevier-Mosby. St Louis, Missouri. (Chapter 2: The Well-Being of the Paramedic). Students will be provided with relevant readings (primarily via WebCT).

Recommended Reading

Class Contact
Four hours per week.

Assessment
- Individual 500 word assignment (10%). P2, I3, O2, W2, A2. Two 500 word group assignments (2 x 10%). C3, P2, I3, O2, W2, A2. Completion of one workbook (20%). P2, I3, O2, A2. Exam (50%).

HFB3125 RESEARCH IN PARAMEDIC PRACTICE
Campus St. Albans, Internet
Prerequisites Paramedic Science 2
Learning Outcomes
1. Understand basic research methodology and terminology;
2. Describe the main differences between qualitative and quantitative research;
3. Discuss the advantages and disadvantages of the different methodologies;
4. Have a beginning level of understanding of research design, establishing the rigour of a research process, methods of data collection and analysis and reporting on research data;
5. Retrieve appropriate articles for a literature review;
6. Conduct an in-depth critical appraisal of research articles;
7. Recognise the significance of consent, confidentiality and other ethical considerations in relation to research.

Content
Principles of research Research ethics Research paradigms Qualitative and quantitative research designs Data collection and data analysis Critical evaluation of research Analysis and criticism of research reports

Required Reading
Hardcopy materials and audiovisual support material developed and supplied by the Paramedic Science Unit, School of Health Science.

Recommended Reading

Class Contact
48 hours over one 12-week semester comprising four (4) hours per week: 2 hours on-line lectures/week 2 hours on-line tutorials/week

Assessment
This subject has three (3) pieces of graded assessment: pass/high distinction 1. Critical Appraisal exercise (1000 words) 25% – P3, I3, W3, A3, C3, D3 2. Critical appraisal exercise (1000 words): 25% – P3, I3, W3, A3, C3, D3. Examination (2 hours): 50% – W3, P3 In order to pass the subject a satisfactory grade in each component of the assessment must be achieved.

HFB3211 INTEGRATION OF PARAMEDIC PRACTICE 1
Campus St Albans, Off Campus, Online
Prerequisite(s) Successful completion of Years One and Two; or equivalents.

Content
This subject will allow each student to extend and refine their particular area of professional paramedic practice. Students are expected to apply the principles developed in Professional Basis of Paramedic Practice 1 and 2 to their current paramedic practice and to concentrate on the professional development of their nominated area through observation, participation, discussion, and self-reflection.

Required Reading
To be advised by Lecturer.

Recommended Reading
To be advised by Lecturer.

Website webct.vu.edu.au/

Subject Hours
Four hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or equivalents.

Assessment
Portfolio (100%). To obtain at least a Pass in the subject, normally the assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HFB3222 INTEGRATION OF PARAMEDIC PRACTICE 2
Campus St Albans, Off Campus, Online
Prerequisite(s) Restricted to students enrolled in the Bachelor of Health Science – Paramedic (1 yr Conversion) degree course.

Content
This subject re-introduces and extends the fundamentals of paramedicine. A systems approach reinforces the anatomical, physiological, pathophysiological and pharmacological aspects of care from the perspectives of the paramedic. Applied considerations will be given to a range of adult and paediatric emergencies.

Required Reading
To be advised by Lecturer.

Recommended Reading
To be advised by Lecturer.

Website webct.vu.edu.au/

Subject Hours
Four hours per week for one semester comprising lectures and self-directed learning activities or online equivalent.

Assessment
Essay (1500 words) (25%); weekly online activities including contributions to online discussions (15%); final online examination of multiple-choice questions only (60%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (essay and weekly activities) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HFB3226 MAJOR INCIDENTS
Campus St Albans, Internet
Prerequisites Advanced Paramedic Practice 1

Learning Outcomes
On successful completion of this unit, the student will:
1. Define a major incident
2. Describe traditional disaster threats including natural phenomena such as floods, cyclones, earth quakes, tsunamis, fires, land slides, volcanic eruptions, and drought
3. Describe new disaster threats including, wars, social violence, terrorism, civil unrest, epidemics and chemical and nuclear accidents or warfare.
4. Discuss the principles of risk assessment and major incident planning, preparation, and coordination.
5. Discuss the main elements of the National Major Incident and Disaster Policy.
6. Describe the emergency services response to a major incident including police, fire, ambulance, health, state emergency service and other support agencies.
7. Discuss the importance of a multi-disciplinary response to a major incident.
8. Discuss medical service major incident planning, preparation, response and recovery.
9. Discuss and demonstrate principles of good communication at major incident.
10. Identify and describe reasons for poor communication at major incidents.
11. Demonstrate effective communications during a major incident simulation.
12. Discuss the role of the media at a major incident.
13. Discuss the principles of major incident management including principals of command and control and the Incident Command System (ICS).
15. Define triage.
16. Describe and discuss the evolution of modern triage principals, the aims of triage and triage priorities.
17. Demonstrate correct application of triage and treatment principals during a major incident simulation.
18. Describe the organisation and types of transportation used at a major incident.
19. Discuss and describe the major physiological and sociological effects following a major incident including survival, bereavement, and post traumatic stress.

Content This unit will cover:
1. The history of major incidents.
2. Principals of major incident planning, preparation, response and recovery.
3. The role and responsibilities of emergency services in the event of a major incident.
4. The roles and responsibilities of Ambulance and medical services in the event of a major incident.
5. Communications.
6. Major incident medical management-command and control. The Incident Command System.
7. Major incident management, treatment, transport.
8. Sociological and psychological impacts of major incidents.

Required Reading

Recommended Reading

Class Contact
48 hours over one 12-week semester comprising four (4) hours per week: 2 hours on-line lecturers/week 2 hours on-line tutorials week.

Assessment
The grading system for this subject with be pass/high distinction. This unit has three (3) assessment items, a one (1) three thousand words (3000) assignment each worth 50% of the total mark. These assignments will include reports on the current statistic of evidenced based concepts with in the discipline of pre-hospital care, research and literature reviews that aim to identify an evidence based practice and essays that require students to integrate theory into an operational context. To obtain a pass in this unit all components of assessment must be attempted and passed. Failed assessments may be re-attempted/re-submitted once only. Maximum possible marks to be obtained on any re-submission will be 50%. This unit is hurdle requirement.

HFB3227 PARAMEDIC EVIDENCE BASED HEALTH CARE
Campus St Albans, Internet.
Prerequisites Advanced Paramedic Practice 1

Learning Outcomes
On successful completion of this unit, the student will:
1. Apply the skills and knowledge of evidenced based health care required in this subject to evaluate their work as a paramedic.
2. Critically examine current protocol systems and how they inhibit, support and or constrain the clinical decision making process.
3. Apply knowledge, skills and values, which will enable them to reflect their opinion and practice of pre-hospital care.
4. Understand the decision making process as it applies to diagnostic reasoning in pre-hospital care.

Content
This unit will cover:
1. Principals of evidence based practice.
2. Hierarchies of evidence.
3. Assessing the methodological quality of evidence.
4. Clinical decision making.
5. Models of reasoning.
7. Critical incidents associated with the decision making process.
8. Implementing evidence based findings.
9. Evaluating the relevance of care plans to pre-hospital care.
10. The process of documentation associated with clinical decision making in pre-hospital care.
11. Critique of current protocol systems within the context of the clinical decision making process.

Required Reading

Recommended Reading

Class Contact

Assessment
This unit has two (2) assessment items, two (3) thousand word (3000) assignments each worth 50% of the total mark. These assignments will include reports on the current statistic of evidenced based concepts with in the discipline of pre-hospital care, research and literature reviews that aim to identify an evidence based practice and essays that require students to integrate theory into an operational context. To obtain a pass in this unit all components of assessment must be attempted and passed. Failed assessments may be re-attempted/re-submitted once only. Maximum possible marks to be obtained on any re-submission will be 50%.

HFB3228 ADVANCED PARAMEDIC PRACTICE 2
Campus St Albans, Internet.
Prerequisites Advanced Paramedic Practice 1

Learning Outcomes
On successful completion of this unit, the student will:
1. Describe the health challenges and long-term outcomes of patients with selected medical and trauma conditions.
2. Discuss the efficacy of pre-hospital intervention in relation to immediate and long-term patient functional outcome.
3. Discuss in-hospital management of patients with selected medical and trauma conditions.
4. Critically analyse current pre-hospital care treatment regimes.
5. Describe clinical tests used in diagnosis and assessment of patients with selected medical and trauma conditions.
6. Demonstrate the appropriate and correct use of pre-hospital clinical skills in simulation exercises.
7. Demonstrate advanced clinical decision making skills and apply knowledge of pathophysiology of selected conditions to pre-hospital simulation situations.

Content
This subject will cover the following topics:
1. Review and revision of the pathophysiology and pre-hospital management of selected medical and trauma conditions including:
   - Cardiovascular emergencies
   - Pulmonary emergencies
   - Neurological emergencies
   - Brain trauma
   - Toxicological emergencies
   - Multi-trauma
   - Urinary emergencies
   - The immune compromise patient
HFB3301 ISSUES IN PREHOSPITAL HEALTH SERVICE DELIVERY
Campus St Albans, Off Campus, Online
Prerequisite(s) Successful completion of Years One and Two; or equivalents.
Content This subject introduces students to a range of key concepts that influence health service delivery in out-of-hospital practice. Students will relate to their own perspectives and experiences in order to explore and analyse the many roles of the paramedic in health service delivery.
Required Reading To be advised by Lecturer.
Recommended Reading To be advised by Lecturer.
Website webct.vu.edu.au/
Subject Hours Three hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.
Assessment Portfolio (100%). To obtain at least a Pass in the subject, normally the assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HFB3401 PREHOSPITAL ETHICAL AND LEGAL ISSUES
Campus St Albans, Off Campus, Online
Prerequisite(s) Successful completion of Years One and Two; or equivalents.
Content This subject enables students to explore ethical and legal issues and their implications for paramedics and paramedicine. Students' experiences will be drawn upon to demonstrate and scrutinise their responses to common situations that occur in paramedic practice which may cause ethical and legal dilemmas.
Required Reading To be advised by Lecturer.
Recommended Reading To be advised by Lecturer.
Website webct.vu.edu.au/
Subject Hours Four hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.
Assessment Negotiated written report or portfolio (100%). To obtain at least a Pass in the subject, normally the negotiated assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HFB3501 RESEARCH IN PARAMEDIC PRACTICE
Campus St Albans, Off Campus, Online
Prerequisite(s) Successful completion of Years One and Two; or equivalents.
Content This subject investigates major research considerations and focuses on facilitating the students' abilities to critically analyse research reports. Emphasis is placed on the application of research findings to paramedic practice and ways in which applications can be facilitated.
Required Reading To be advised by Lecturer.
Recommended Reading To be advised by Lecturer.
Website webct.vu.edu.au/
Subject Hours Four hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.
Assessment Negotiated written report or portfolio (100%). To obtain at least a Pass in the subject, normally the negotiated assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HFB3700 PARAMEDIC INSTRUCTION AND MENTORING (ELECTIVE)
(Offered in 2005 subject to demand)
Campus St Albans, Off Campus, Online
Prerequisite(s) Successful completion of Years One and Two; or equivalents.
Content This subject introduces students to the concept of clinical preceptorship, mentoring, instruction and action-based research in a paramedic focused settings. Students will plan and implement a specific activity based on a literature review and participation in professional practice. Students will be assisted to develop skills in goal
and outcomes setting, data collection and interpretation of action research based on their clinical mentoring experience.

**Required Reading** To be advised by Lecturer.

**Recommended Reading** To be advised by Lecturer.

**Website** webcit.vu.edu.au/

**Subject Hours** Three hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.

**Assessment** Negotiated written report or portfolio (100%). To obtain at least a Pass in the subject, normally the negotiated assessment task must be attempted and passed. If the assessment item is failed, it may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HFB3800 PARAMEDIC PROFESSIONAL WRITING (ELECTIVE)**

(Offered in 2005 subject to demand)

**Campus** St Albans, Off Campus, Online

**Prerequisite(s)** Successful completion of Years One and Two; or equivalents.

**Content** This subject will introduce students to the practice of developing a paramedic body of knowledge through professional writing. Students will rely on their professional experience and the professional literature to produce a paper (or series of papers) suitable for submission to a refereed professional journal. Students will use publication guidelines and instructions to authors in paramedic or other suitable journals and will be assisted in the development of their journal paper(s). Emphasis will be on extending the students’ critical appraisal, synthesis and higher order cognitive skills when developing their professional writing skills.

**Required Reading** To be advised by Lecturer.

**Recommended Reading** To be advised by Lecturer.

**Website** relevant journal sites

**Subject Hours** Three hours per week for one semester comprising lectures, tutorials, practicals and self-directed learning activities or online equivalents.

**Assessment** Participation in on-line discussion as specified at the beginning of the semester (hurdle requirement); one written task (2000 words) (40%); one written task (2500 words) (60%).

**HFB3700 PARAMEDIC INSTRUCTION AND MENTORING**

**HFB3800 PARAMEDIC PROFESSIONAL WRITING**

**HHA1171 ANATOMY 1**

**Campus** St Albans, City Flinders, Off Campus

**Prerequisite(s)** Nil

**Co-requisite(s)** HHO1171 Osteopathic Science 1; or equivalent.

**Student Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Use anatomical language correctly to describe anatomical structures and planes of the musculoskeletal system of the lower body;
2. Identify, name, and describe the bones, muscles, ligaments, connective tissue structures, vessels, and nerves of the lower limb, thorax, abdomen, inguinal region and pelvis;
3. Identify the key anatomical structures and spaces of the lower body, thorax, abdomen, inguinal region and pelvis on models and cadaveric specimens;
4. Describe and define the somatic and autonomic nervous systems, and anatomical spaces of the lower limb, spine, back, thorax, abdominal wall and external head and neck;
5. Describe and demonstrate using cadaveric specimens the anatomical spaces and pathways of vessels and nerves of the lower limb, spine, back, thorax, abdominal wall and external head and neck;
6. Briefly comment on the clinical relevance of the key anatomical features of the lower body;

**Content** Topics include definitions of anatomical terms; arthrology, osteology, angiology and myology; the somatic nervous system; autonomic nervous system; anatomy of the back, abdomen and thorax; respiratory muscles; the neck; the upper limb; and clinical applications of musculoskeletal anatomy.


**Class Contact** Hours Six (6) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory practicals. Practical sessions have a hurdle requirement of at least 90% attendance.

**Assessment** Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one 1-hour combined practical and oral examination (OSCE format) (50%) (hurdle requirement); one 2-hour final written examination (50%) (hurdle requirement).

**HHA1272 ANATOMY 2**

**Campus** St Albans, City Flinders, Off Campus

**Prerequisite(s)** HHA1171 Anatomy 1; or equivalent.

**Co-requisite(s)** Nil

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Use anatomical language correctly to describe anatomical structures and planes and motions of the musculoskeletal system of the lower body;
2. Identify, name, and describe the bones, muscles, ligaments, connective tissue structures, vessels, and nerves of the lower limb, thorax, abdomen, inguinal region and pelvis;
3. Identify the key anatomical structures and spaces of the lower body, thorax, abdomen, inguinal region and pelvis on models and cadaveric specimens;
4. Describe and define the somatic and autonomic nervous systems, and anatomical spaces of the lower limb, thorax, abdomen, inguinal region and pelvis;
5. Describe and demonstrate using cadaveric specimens the anatomical spaces and pathways of vessels and nerves of the lower limb, thorax, abdomen, inguinal region and pelvis;
6. Briefly comment on the clinical relevance of the key anatomical features of the lower body;

**Content** Topics include definitions of anatomical terms; arthrology, osteology, angiology and myology; the somatic nervous system; autonomic nervous system; anatomy of the back, abdomen and inguinal regions; the pelvis; the lower limb; clinical applications of musculoskeletal anatomy.

### HHA2173 ANATOMY 3

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HHA1272 Anatomy 2; or equivalent.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Identify, name and describe anatomical structures within the human head, neck and thorax, including nervous, vascular, lymphatic and otorhinolaryngeal systems, from regional perspectives;

2. Describe the developmental processes and anatomy of all the major systems in the head, neck and thorax, including the upper digestive, cardiovascular, respiratory systems;

3. Communicate knowledge of the anatomy of the head, neck and thorax (including bones, vessels and spaces) to colleagues and to lay people in ways that each group can understand;

4. Relate the relevant anatomical structures within the head, neck and thorax to osteopathic practice.

**Content** Visceral anatomy of the head, neck and thorax, including the nervous, vascular, lymphatic and gastrointestinal, reproductive, urogenital systems; the developing human (6th ed.). W. B. Saunders Co. Ryan, E. (2006). HHA2173 Anatomy 3 subject manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.

**Recommended Reading**


**Assessment**

- Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement);
- One 1-hour combined practical and oral examination (OSCE format) (50%)(hurdle requirement);
- One 2-hour final written examination (50%) (hurdle requirement).

#### Learning Outcomes

1. Identify, name and describe anatomical structures within the abdomen and pelvis, including the fascia and nervous, vascular and lymphatic systems, from regional perspectives;

2. Describe the developmental processes and anatomy of all the major systems in the abdomen and pelvis, including the gastrointestinal, reproductive, urogenital systems;

3. Communicate knowledge of the anatomy of the abdomen and pelvis (including bones, vessels, fascia and spaces) to colleagues and to lay people in ways that each group can understand;

4. Relate the relevant anatomical structures within the abdomen and pelvis to osteopathic practice.

**Content** Visceral anatomy of the abdomen and pelvis, including the histology of visceral tissues. Embryological development of the major systems, including the neuromusculoskeletal system.


**Assessment**

- Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement);
- One 1-hour combined practical and oral examination (OSCE format) (50%)(hurdle requirement);
- One 2-hour final written examination (50%).

### HHA2375 ANATOMY 5

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HHA2274 Anatomy 4; or equivalent.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Identify, name and describe anatomical structures within the abdomen and pelvis, including the fascia and nervous, vascular and lymphatic systems, from regional perspectives;

2. Describe the developmental processes and histology of all the major systems in the abdomen and pelvis, including the gastrointestinal, reproductive, urogenital systems;

3. Communicate knowledge of the anatomy of the abdomen and pelvis (including bones, vessels, fascia and spaces) to colleagues and to lay people in ways that each group can understand;

4. Relate the relevant anatomical structures within the abdomen and pelvis to osteopathic practice.

**Content** General and radiographic anatomy, histology and embryology of the human body. Various visceral and musculo-skeletal diseases and conditions and associated clinical significances. Progressive procedures and specimen review of human material in a supervised ‘wet lab’ environment.

**Required Reading**


1. Use advanced acupuncture and Chinese medicine theory;
2. Demonstrate professional skills, attitude and presentation as modelled by clinical educators;
3. Monitor the consultation process;
4. Give supervisors a CM diagnosis of the client they are treating;
5. Locate and needle accurately acupuncture points appropriate to client needs;
6. Use, and know when to use, moxa, cupping, Gua Sha, point injection therapy, dermal hammer, laser, electric stimulator and Chinese medicine;
7. Demonstrate skilful use of relevant diagnostic equipment;
8. Maintain detailed record of case notes;
9. Conduct examination procedures in a way to minimize patient distress, embarrassment and risk of injury;
10. Explain clinical significances of both negative and positive findings in plain English;
11. Assess the client’s needs for ongoing treatment;
12. Communicate the course of treatment to the client in plain English;
13. Liaise and work effectively with clinical educators;
14. Mentor students in the clinic;
15. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content During the first week of semester, students will attend two 2-hour seminars to orient them to the final level of the clinical program; to review expectations of them in the clinic; to review student ethics and professional behaviour; Students undertake their final year clinical placement as the Intern Practitioner in approved settings. Internship Practitioner: The student practitioner is expected to conduct themselves in the professional manner as demonstrated by Practitioner Clinicians, working under the supervision of a qualified Chinese medicine practitioner. Skills required of the intern practitioner: document case-notes, define diagnosis, treatment principles and where appropriate apply acupuncture. The intern practitioner works independently and assumes full responsibility for the conduct of each consultation, and production of a final prescription. The supervising practitioner is accessed as required.


**Recommended Reading** To be advised by Lecturer.

**Class Contact** A required minimum of the equivalent of one hundred and fifty-four (154) hours in an approved clinical setting per semester (hurdle requirement).

**Assessment**
- Overall satisfactory report(s) from clinical placement(s) (50%): hurdle requirement
- Combined practical and oral examination (50%): hurdle requirement

Supervised placement comprising successful completion of the required equivalent of 154 clinical hours (pass/fail) (hurdle requirement). To obtain at least a Pass in the unit, normally all components of assessment must be attempted and passed. Failed assessment item (practical and oral examination) may be re-attempted once only. Proficiency standard must be obtained on any re-attempted examination. Any failed assessment item will need to be discussed in the first instance with the Clinical Co-ordinator. This unit is a hurdle requirement for graduation. All assessment items address the CGA levels as indicated in the Learning Outcomes.

**HHC2171 BIOMECHANICS 1**
**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HHA1272 Anatomy 2; HHP1171 Physiology 1; or equivalents

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Define and use correctly basic biomechanical terminology and principles;
2. Discuss basic biomechanical principles in relation to osteopathic practice;
3. Describe using general concepts, the structure and function of the components of joints;
4. Explain the functions of the various joints and tissues in the human body;
5. Comment on laboratory analysis techniques in kinetics, kinematics and gait.


**Recommended Reading**

**Class Contact** Three (3) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory practices.

**Assessment** Class quizzes (total 30%); one 10-minute video presentation (30%), one 2-hour final written examination (40%).

**HHC3173 BIOMECHANICS 3**
**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HHC2272 Biomechanics 2; or equivalent.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Apply biomechanical principles and knowledge of anatomy to common activities;
2. Apply biomechanical principles to the analysis of daily and other specified activities;
3. Apply appropriate laboratory-based methods to analyse those activities;
4. Orally present individual biomechanics research findings in a seminar setting.

**Content** Application of biomechanics to daily living and common activities. Gait, posture, ergonomics, lifting. Walking and running injuries; shoulder – throwing and injuries; sport biomechanics.

**Required Reading**

**Class Contact** Three (3) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory practices.

**Assessment** Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); seminar questions (40%), one 2-hour written examination (60%).

**HHC3274 BIOMECHANICS 4**
**Campus** St Albans, City Flinders, Off Campus

**Prerequisites** HHC3173 Biomechanics 3; or equivalent

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Integrate different knowledge aspects of biomechanics;
2. Replicate a research study in biomechanics, applying knowledge and skills acquired in earlier semesters;
3. Present orally individual or group research to colleagues and to lay people in ways that each group can understand;
4. Produce written reports of individual or group research in a conventional scientific format.

**Content** The research process in biomechanics. Replication of a published study in the biomechanics literature. Reliability and validity of test data. Written and oral presentations of the student’s biomechanics research project.

**Required Reading** There are no set texts for this unit. Reading will be influenced by the nature the research project undertaken by the
6. Compare and contrast benign and malignant neoplasias.

**Content**
The unit extends students' theoretical knowledge of aspects of anatomy, physiology, pathology, pharmacology, and treatment. It provides an understanding of the role of surgery in the treatment of skin disease and the management of common skin conditions.

**Learning Outcomes**
On successful completion of this unit, it is expected that students will be able to:

1. Explain the pathological mechanisms involved in skin disease and their impact on cell function.
2. Compare the pathophysiology of different skin conditions, including anaphylaxis and allergic reactions.
3. Discuss the role of genetics in skin disease.
4. Evaluate the effectiveness of treatment options for common skin conditions.
5. Critically appraise recent research findings in skin disease.
6. Apply knowledge of skin disease to clinical practice.

**Assessment**
This unit has three assessment items: A one-hour multiple-choice examination (30%), an assignment (30%), and a written examination (40%).
HHD1203 DERMAL WORKPLACE PRACTICES

Campus City King – Internet

Prerequisites Students will require access to or be employed by an appropriate salon or dermal clinic in order to complete assessment tasks associated with this unit.

Co-requisites Nil

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Discuss workplace issues that impact on individuals (self, the client) and groups (employees) working in dermal therapy and other allied practices;
2. Give psychological explanations for group and individual responses (thoughts, actions and feelings) typically found in dermal therapy and other allied practices;
3. Reflect on their tertiary education and workplace experiences in a constructive manner;
4. Document their use of reflective practice to maintain or improve cohesion in the workplace;
5. Document examples from their workplace in which psychological theories and reflective practice have been applied to issues arising with clients;
6. Describe client responses (thoughts, actions and feelings) that warrant consideration for referral to external agencies;
7. Give written and spoken examples of referrals to external agencies.

Content This unit is expected to cover strategies for health professionals in dermal therapy workplace. Individual (student practitioner, the client, the employee) and group (employee-employee) issues are examined, and psychological explanations for individual and group responses typically found in dermal therapy and other allied practices are discussed. Psychological conditions typical of some clients are explained further and appropriate communications strategies are provided. Client responses warranting referral are covered in conjunction with referral procedures to external agencies. Students are required to document their use of reflective practice in the workplace.


Class Contact

Assessment Reflective journals (1500 words) Students are to present a reflective journal encompassing their opinions and related arguments or agreements to each lecture) 45% (P2, I1, W1, A1, D2) Protocol workbook (1500 words – students are to select five issues covered in the lectures and prepare a standard protocol on how to address these issues in the workplace setting). 55% (P2, I1, W1, A1, C1, D2)

HHD1271 CLINICAL DIAGNOSIS & MANAGEMENT 1

Campus St Albans, City Flinders, Off Campus

Prerequisite(s) HHO1171 Osteopathic Science 1; HHA1171 Anatomy 1; HH1171 Physiology 1; or equivalent.

Co-requisites HHY1271 Pathology 1; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Contrast the chemical formulas, properties and actions and adverse reactions of a range of chemical peels and cosmeceuticals commonly used on the skin in the aesthetics industry;
2. Discuss issues of toxicology as they relate to the use of chemicals on the skin;
3. Outline the clinical manifestations, differential diagnoses, pathophysiology, aetiology, treatment and management and epidemiology for a range of dermatological conditions;
4. Discuss the role of the dermal clinician in the management of various dermatological conditions.

Content This unit builds on the knowledge presented in Health Science 1 by further researching advanced skin structure and cosmetic dermatology, specifically in the area of dermatological conditions. This unit also covers the clinical features, pathophysiology, aetiology, treatment and management, and epidemiology of a range of non-infectious dermatological conditions. Conditions include dermatitis, eczema, psoriasis, benign and pre-malignant skin lesions and skin cancers. Other skin disorders requiring the introduction and development of pharmacology and toxicology are also discussed. Principles of pharmacology and toxicology are reinforced with research studies on the effects of various drugs and chemicals on the skin. Students are expected to investigate the effects on the skin of various cosmetic ingredients especially those in chemical peels and cosmeceuticals preparations. Client responses warranting referral to a medical practitioner are covered and students will be expected to become familiar with the Therapeutic Goods Act and other legislation relevant to practical work in dermal therapy.


Class Contact 4 hours per week

Assessment This unit has three (3) assessment items: This unit has three (3) assessment items: A two (2) hour online examination 35% (P3, I3, W3, A3); One (1) ten minute presentation (online) 30% (P3, I3, O2, W3, C3, D3) One (1) assignment 2000 words, 35% (P3, I3, W3, A3, C3, D3) The student will be required to investigate, discuss and cranial nerves, abdomen, peripheral nervous system, musculoskeletal system. Students will be trained in the use of equipment employed in clinical examinations, including the stethoscope, otoscope, ophthalmoscope, reflex hammer, tuning fork, and sphygmomanometer.


Students should have access to a copy of the most recent MIMS or the Australian medicines handbook available from Australian Medicines Handbook Web site, http://www.amh.org.au

present a dermatological problem, how it would have been treated in the past and how they would revise treatment with new knowledge gain in Health Science 1, 2 and 3.

HHD2172 CLINICAL DIAGNOSIS & MANAGEMENT 2
Campus Albury, City Flinders, Off Campus.
Prerequisites HHD1172 Clinical Diagnosis & Management 1; HHY1271 Pathology 1; or equivalents.
Co-requisites HHY2172 Pathology 2; or equivalent.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Describe common and serious clinical scenarios in the haematological, cardiovascular, renal and urogenital systems;
2. Demonstrate appropriate examination skills relevant to the cardiovascular, renal and urogenital systems;
3. Recognise symptoms or signs that warrant referral to another practitioner including those that require immediate referral; 4. Describe and use the communication skills involved in the consultative process;
5. Discuss models of clinical judgment used by a practising General Practitioner in relation to their own clinical experience;
6. Explain the appropriate applications of and typical pathological findings from widely employed laboratory, radiological and other special investigations of the haematological, cardiovascular, renal and urogenital systems.

Content Clinical presentations of common and life-threatening diseases affecting the haematological, cardiovascular, renal and urogenital systems will be discussed. The unit features common clinical scenarios with clinical examination of those scenarios, and the common laboratory and radiological tests used in the investigations of those scenarios. Particular emphasis will be given to conditions that are of special interest to osteopaths.

Class Contact Four (4) hours per week or equivalent for one semester comprising lectures and tutorials.
Assessment One 15-minute practical examination (35%); one 2-hour written examination (65%).

HHD2204 DERMAL ANATOMY AND PHYSIOLOGY
Campus City Flinders, City Queen, City King
Prerequisites Satisfactory completion of all Diploma of Beauty Therapy TAFE units, or equivalent
Learning Outcomes On successful completion of this unit the student will be able to:
• Describe the structure and function of the circulatory system
• Describe the craniofacial vasculature and the microvasculature of the skin
• Describe the structure of the lymphatic system as it relates to the practice of dermal therapies treatments such as clinical manual lymphatic drainage and machine based lymphatic drainage
• Describe the skeletal system structure and function, with an emphasis on craniofacial osteology, arthrology and bony landmarks
• Describe muscular structure and function as it relates to the practice of dermal therapies
• Describe cellular structure and membrane function
• Describe the structure and function of the nervous system and brain
• Apply the principles of microbiology to the application of dermal therapies procedures
• Describe the endocrine system and the function of hormones as they relate to the performance of dermal therapy procedures

A more complete knowledge of microbiology will enable the student to better understand some of the concepts of infection control and sterile procedures covered in the clinical practice units. The student will gain the underpinning knowledge of cell and tissue structure and function required to more confidently apply the dermal techniques and to assist in understanding the concepts of pathology and dermatology covered in Dermal Science and Dermatology.

Content The unit will introduce students to theoretical aspects of anatomy, physiology, and microbiology relevant to the practice of dermal therapy. The unit will provide important underpinning knowledge that students will require in their practical applications throughout the degree program. Knowledge to be developed will include cell and cell membrane structure and function, osteology and arthrology, muscular systems, circulatory systems, lymphatics, tissues types, brain and nerves, endocrine system and identification and biochemistry of microorganisms.


Class Contact 4 hours per week or equivalent
Assessment 30% Reading exercises (Composed of a series of short answer questions relating to selected journal articles) 35% Assignment (Essay 2000 words) 35% Written Examination (2.5 hours duration)

HHD2205 DERMAL LASER PRACTICE AND TECHNIQUES 1
Campus City King, Internet
Prerequisites HHD2101 Dermal Health Science 3. Students will require access to or be employed by an appropriate salon or dermal clinic in order to complete assessment tasks associated with this unit.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss how the Australian and New Zealand standards for the safe use of lasers in a health care setting apply to the use and management of these modalities in dermal therapies;
2. Describe and discuss the properties of laser light;
3. Describe and discuss a range of laser tissue interactions;
4. Explain the mechanisms underlying the effectiveness of certain laser and light-based therapies;
5. Describe and discuss issues of laser safety relevant to the use of laser devices for aesthetic purposes;
6. Explain in plain English (as if to a client), general safety issues that apply to health care settings in which lasers are used;
7. Discuss legislative issues in relation to the use of non-ionising radiation sources for aesthetic purposes.

Content This unit covers aspects of laser light physics and laser safety. Topics include laser optics, laser properties, laser tissue interactions, light-based dermal treatments, introduction to mechanisms underlying certain laser and light-based therapies; and safety issues involved with the use of cosmetic laser devices in a health care setting. Principles of laser safety are according to Australian Standards and related government regulations. Successful completion of this unit requires that students attend and successfully complete the intensive practical study block (on campus) associated with the unit.


Class Contact 3 hours per week
Assessment This unit has three (3) assessment items: This unit has three (3) assessment items: A two (2) hour online examination 40% (P2, I2, W2, A2, D2); One (1) identification of laser and light safety issues exam 20% (P2, I2, W2, A2, D2); One (1) assignment, 2000 words, 40% (P2, I2, W2, A2, D2) The student will be required to investigate laser or light based therapy procedure and discuss this
procedure in light of the knowledge gained in laser safety and laser physics.

HHD2206 DERMAL LASER PRACTICE AND TECHNIQUES 2
Campus City King, Internet
Prerequisites HHD2101 Dermal Health Science 3. Students will require access to or be employed by an appropriate salon or dermal clinic in order to complete assessment tasks associated with this unit.
Co-requisites HHD2205 Dermal Laser Practice and Techniques 1 and HHD2207 Dermal Laser Practice and Techniques 3
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Describe and discuss the range of conditions treated with Class 3b lasers;
2. Explain the mechanisms underpinning the effectiveness of Class 3b laser and photodynamic therapies;
3. Perform a range of laser and light based treatments, safely, effectively and efficiently, according to client needs and procedure protocols;
4. Describe and discuss the range of treatment modalities in photodynamic therapy and perform these modalities to the appropriate skin conditions;
5. Explain the use of class 4 laser devices for tattoo removal;
6. Explain the use of radio frequency devices in dermal therapy;
7. Comment on the range of new technologies and recent laser and light based therapy devices;
8. Assess client needs and suitability for a range of light based treatments;
9. Communicate appropriately with clients (in plain English) and fellow clinicians (in plain and technical language) about conditions, treatment options and treatment plans.

Content
This unit covers aspects of theory and application of laser and light based procedures. The unit includes topics such as laser tissue interactions in relation to Class 3b lasers, radio frequency devices, class 4 lasers for tattoo removal and resurfacing, and photodynamic therapy. Knowledge and skills in a range of laser and light-based therapy devices are developed further, and students will apply laser safety protocols associated with the use of cosmetic laser devices in a health care setting. Professional skills, attitude and presentation appropriate for a clinician dealing with laser and light-based therapy devices are expected. Successful completion of this unit requires that students attend and successfully complete the intensive practical study block (on campus) associated with the unit.

Required Reading
Recommended Reading

HHD2208 MEDICAL PROCEDURES RELATED TO DERMAL THERAPY
Campus City King, Internet
Prerequisites HHD2101 Dermal Health Science 3. Students will require access to or be employed by an appropriate salon or dermal clinic in order to complete assessment tasks associated with this unit.
Co-requisites Nil.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Describe appropriate record keeping requirements for a medical setting;
2. Correctly use medical terminology pertinent to dermal therapy;
3. Explain in plain English, casenotes relevant to dermal therapy from patients who have undergone routine plastic, reconstructive or cosmetic procedures;
4. Describe and discuss at a basic level, the principles and techniques typically used in routine cosmetic, plastic and reconstructive procedures;
5. Discuss appropriate pre- and post-operative management and adjunctive therapies used by dermal clinicians for patients who have undergone cosmetic, plastic and reconstructive procedures;
6. Describe and document complications and adverse outcomes typically seen in dermal therapy;
7. Describe and document procedures and management plans for complications and adverse outcomes typically seen in dermal therapy;
8. Explain the process of aging skin;
9. Discuss the management of issues related to the management of aging skin and other fragile skin conditions;
10. Evaluate the role of the dermal therapist in relation to cosmetic, plastic and reconstructive medical procedures.

Content
In this unit, students are introduced to theoretical aspects of specific medical procedures that relate to dermal therapy. Medical and
aesthetic reasons for a range of approaches will be outlined using terminology typically used in medical and health care settings. Basic clinic management procedures will include appropriate record keeping and case note recording. Students will observe, via various media, a representative range of face and body procedures include plastic, reconstructive and cosmetic. Pre- and post-operative management and adjunctive therapies used by dermal clinicians are included. Other topics are: aging skin; management of aged skin and other fragile skin issues; management and documentation of complications and adverse outcomes; and the role of the dermal therapist and medical procedures.


**Recommended Reading** To be determined by the student according to their assignment focus.

**Class Contact** Independent research together with regular online and telephone contact with the project coordinator and other students of the Clinical Practice unit of study as advised by the project coordinator.

**Assessment** This unit has three (3) assessment items: This unit has three (3) assessment items: One (1) Case Study (2000 words) 40% (P2, I2, W2, A2, D2) Students will be required to investigate and discuss the issues involved with the care of a patient who has undergone a plastic, reconstructive or cosmetic procedure. Two (2) Online discussion exercises (Composed of a series of short answer questions relating to selected journal articles) 20% (P2, I2, W2, A2, C2, O2) One (1) two and a half hour (2.5 hour) written examination 40% (P2, I2, W2, A2, D2)

**HHD2214 HEALTH RESEARCH STUDY PERSPECTIVES**

**Campus** City King, City Flinders, Queen St

**Prerequisites** Satisfactory completion of all the Diploma TAFE units (or equivalent)

**Learning Outcomes** On successful completion of this unit the student will be able to: understand how to read research papers (assessed via article critique / essay), and how to determine quality of design, by having a greater understanding of the statistics (assessed via exam) contained within, and by being able to make a clear distinction between strong and weak research findings (assessed via article critique / essay). The students will be able to make the distinction between TAFE and higher level University standards with regard to level of assessment and academic writing (assessed via essay). They will be able to reference in APA format and be able to write an essay at University standard (assessed via essay).

**Content** This subject provides an introductory research focus for health care professionals with an emphasis on basic quantitative paradigms. A primary aim of this introductory research subject will be to facilitate the students’ ability to critically analyse and evaluate selected research literature relating to health sciences with particular reference to the safe practice of applied dermal therapies. Preparatory academic skills required for the rest of the course will also be covered; these include APA referencing, writing academic essays, and sourcing appropriate information.


**Class Contact** 3 hours per week or equivalent

**Assessment** This unit has three (3) assessment items: One(1) two and a half (2.5 hour) written examination 30% One (1) Article Critique (students are to critique a selected article 1000 words) 20% One (1) assignment 2000 words, 50%

**HHD2224 INDUSTRY PRACTICUM 1**

**Campus** City King, City Flinders, Queen St

**Prerequisites** Satisfactory completion of all the Diploma TAFE units (or equivalent)

**Learning Outcomes** Students will feel more confident in the application of their skills obtained at the diploma level (assessed via situation analysis report). Students will be exposed to a wide range of clients and procedures so that they feel more confident in dealing with future clients (assessed via student portfolio).

**Content** In this subject students will explore the workplace context by examining the organisational structure and identifying and defining their role as an active and accountable employees within industry. They will gain a better understanding as to what techniques are best suited for particular conditions. They will also apply experiential learning.

Students will also be able to reflect on the integration of academic and workplace learning.

**Required Reading** Unit manual to be developed

**Recommended Reading** None

**Class Contact** 12 hours per week within an approved clinical setting.

**Assessment** Hurdle requirement – students are required to undertake workplace-based activities to the equivalent of 450 hours.

This unit has two (2) assessment modalities: Student portfolio – (the student is to develop a portfolio of reports, case studies and reflective journal entries documenting the range of procedures they have been performing 3000 words. Students are also required to assess their skill development against the graduate attributes and identify areas for further development) 70% (P2, I2, O2, W2, A2, C2, D2)

Situation analysis report – students are required to report on the workplace context in which these learning is occurring, and examine its place within industry sector (1000 words) 30% (P2, I2, W2, A2, D2)

**HHD2273 CLINICAL DIAGNOSIS & MANAGEMENT 3**

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HHD2172 Clinical Diagnosis & Management 2; or equivalent.

**Co-requisites** HHY2273 Pathology 3; or equivalent.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. **Describe common and serious clinical scenarios in the respiratory, gastrointestinal and endocrine systems;**
2. **Demonstrate appropriate examination skills relevant to the respiratory, gastrointestinal and endocrine systems;**
3. **Recognise symptoms or signs that warrant referral to another practitioner including those that require immediate referral;**
4. **Describe and use the communication skills involved in the consultative process;**
5. **Discuss models of clinical judgment used by a practising General Practitioner in relation to their own clinical experience;**
6. **Explain the appropriate applications of and typical pathological findings from widely employed laboratory, radiological and other special investigations of the respiratory, gastrointestinal and endocrine systems.**

**Content** Clinical presentations of common and life-threatening diseases affecting the respiratory, gastrointestinal and endocrine systems will be discussed. The unit features common clinical scenarios with clinical examination of those scenarios, and the common laboratory and radiological tests used in the investigations of those systems. Particular emphasis will be given to conditions that are of special interest to osteopaths.


**Class Contact** Four (4) hours per week or equivalent for one semester comprising lectures and tutorials.

**Assessment** One practical examination (35%); one 2-hour written examination (65%).
HHD2304 COOPERATIVE PLACEMENT

Campus City King, City Flinders, Queen St
Prerequisites Industry Placement 1, or equivalent.

Learning Outcomes Students will acquire a deeper understanding of the limitations of beauty therapy procedures and differences with dermal therapy procedures. Students will begin to incorporate the knowledge they have learnt in the previous semester into their work practices.

Content Students will acquire a greater understanding of their future career and study plans and will significantly enhance the prospects of achieving successful graduate employment outcomes (assessed via situational analysis report). The student will be able to begin to critically evaluate their own technical and generic skills and compare them with what extra knowledge and skill is required as a dermal therapist (assessed via student portfolio). Students will be able to identify the benefits of developing networks and professional contacts within the industry (assessed via student portfolio).

Required Reading School Manual to be developed

Recommended Reading None

Class Contact 12 hours per week within an approved clinical setting.

Assessment Hurdle requirement – students are required to undertake workplace-based activities to the equivalent of 450 hours. This unit has two (2) assessment modalities:

- Student portfolio – (the student is to develop a portfolio of reports, case studies and reflective journal entries documenting the range of procedures they have performed and performing 3000 words. Students are also required to assess their skill development against the core graduate attributes and identify areas for further development) 70% (P2, I2, O2, W2, A2, C2, D2)

- Situation analysis report – students are required to report on the workplace context in which these learning is occurring, and examine its place within industry sector (1000 words) 30% (P2, I2, W2, A2, D2).

HHD3000 HEALTH SCIENCE 1

Campus St Albans, City King
Prerequisite(s) Nil
Corequisite(s) HHD3110 Dermal Techniques 1; or equivalent.

Content The subject will introduce students to theoretical aspects of anatomy, physiology, pathophysiology, microbiology, immunology, chemistry, cosmetic dermatology, cellular damage, immunity, allergy inflammation, wound repair, neoplasia and tissue responses to stress relevant to the practice of Dermal Therapy. The subject will provide important underpinning knowledge that students will require in their practical applications throughout the degree program. Knowledge to be developed will include: wound rehabilitation, skin and deeper tissue physiology, inflammatory response and associated damage, identification and biochemistry of micro-organisms, allergic response inflammation, composition of cosmetics and the range of aesthetic-based skin diseases that can be dealt with by the Dermal Therapist.


Subject Hours Six hours per week for one semester comprising lectures, tutorials and laboratory sessions.

Assessment Reading exercises (20%); research assignment (1500 words) (20%); final examination (60%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (research assignment) may be re-attempted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HHD3002 HEALTH SCIENCE 2

Campus St Albans, City King
Prerequisite(s) HHD3000 Health Science 1; or equivalent.

Corequisite(s) HHD3220 Dermal Techniques 2; or equivalent.

Content This subject will build on the knowledge base covered in Health Science 1 by further researching advanced skin structure and cosmetic dermatology, specifically in the area of dermatological conditions that develop as a result of cosmetic substances put on the skin. This subject will also cover the management of non-infectious dermatological conditions such as dermatitis, eczema, psoriasis, benign and pre-malignant skin lesions and skin cancers. A large range of vascular skin disorders and nail diseases will also be considered. This will lead into related pharmacology and toxicology areas and will include studies of the effects of various drugs and chemicals, both topical and oral, on the skin. Students will also be expected to investigate the effects on the skin of various cosmetic ingredients especially those in chemical peels and herbal preparations. In addition to this, students will be expected to become familiar with the Therapeutic Goods Act and other legislation relevant to their practical work.


Subject Hours Three hours per week for one semester comprising lectures, tutorials and laboratory sessions.

Assessment Essay (2000 words) (25%); reading exercises (20%); class presentation (25%); final examination (30%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (essay) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HHD3100 CLINICAL PRACTICE 1

Campus St Albans, City King
Prerequisite(s) HHD3000 Health Science 1; HHD3110 Dermal Techniques 1; or equivalents.

Content In this subject students will be introduced to theoretical aspects of specific medical and therapeutic procedures. Medical and aesthetic reasons for a range of approaches will be outlined. Students will observe a representative range of face and body procedures related to the lectures. In addition, students will develop theatre and sterile techniques including dressings, personal preparation for theatre and setting up for minor cosmetic or aesthetic procedures. Topics include, medical terminology, wound management, infection, infection control, asepsis, sterilization, complications of wound healing, wound redressing, compression bandages and equipment, eye toilets, complications from bandaging and eye toilets, a review of first aid procedures, gloving and gowning, latex allergy, proper documentation and a review of common procedures in cosmetic surgery.


Subject Hours Four hours per week for one semester comprising lectures, tutorials and laboratory sessions.

Assessment Class exercises (20%); case study assignment (2000 words) (30%); final examination (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (case study assignment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

This subject is a hurdle requirement.
**HHD3102 RESEARCH PERSPECTIVES AND PRACTICES**

**Campus** City King, St Albans  
**Prerequisite(s)** Nil  
**Corequisite(s)** HHD3002 Health Science 2; HHD3220 Dermal Techniques 2; or equivalents.  
**Content** This subject provides an introductory research focus for health care professionals with an emphasis on quantitative and qualitative paradigms. A primary aim of this introductory research subject will be to facilitate the students’ ability to critically analyse and evaluate selected research literature relating to health sciences with particular reference to the safe practice of applied dermal therapies. An introduction to the experimental method, basic quantitative and qualitative analytical techniques, case study reports, report writing and ethics in research will also be covered.  

**HHD3104 GRADUATING SEMINAR**

**Campus** City King, St Albans  
**Prerequisite(s)** Students must have satisfactorily completed the first two semesters of coursework for the degree Bachelor of Health Science – Clinical Dermal Therapies; or equivalent.  
**Content** Graduating Seminar is an integrating subject for the course and has been designed to provide students with a framework to link the main elements of the course. The subject will enable students to enhance their critical thinking and integration of knowledge. Particular emphases will be given to 1) the development of research skills in association with the introduction of advanced manual and machine dermal therapies. This will consist of micro-dermabrasion and clinical lymphatic drainage. The basis of these therapies will be presented in the Diploma program and consolidated under the subject, normally all components of assessment must be attempted and passed. Failed assessment items (assessment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.  

**HHD3103 NUTRITION FOR HEALTH AND WELL-BEING**

**Campus** City King, St. Albans  
**Prerequisite(s)** Students must have satisfactorily completed the first two semesters of coursework for the degree Bachelor of Health Science – Applied Dermal Therapies; or equivalent.  
**Content** The aim of this subject is to build upon students’ knowledge of nutrition as presented in the Diploma program and consolidated through ‘work experience’. In this subject students will further their understanding of the role of various vitamins/minerals, food groups and nutritional supplements in healing and well-being. Students will also study the deleterious effects of various diets on skin health and the relationship of nutrition and eating patterns to conditions such as anaemia, bulimia and obesity. Attention will be given to factors which promote nutritional well-being, conditions in which it is appropriate to provide nutritional advice to clients and the identification of situations in which it is necessary to refer clients to specialist health practitioners. Topics include carbohydrates, lipids, proteins, energy, balance, water soluble vitamins, fat soluble vitamins, minerals, dieting, how to recognize the relationship between dieting disorders and skin conditions, referrals, nutritional status of skin, discussions on popular diets-advantages & disadvantages, client management of specific dietary needs in respect of vitamins and minerals, the effects of excessive amounts of vitamins and minerals.  

**HHD3110 DERMAL TECHNIQUES 1**

**Campus** St Albans, City King  
**Prerequisite(s)** Nil  
**Corequisite(s)** HHD3000 Health Science 1 or equivalent.  
**Content** The subject will enhance the student’s knowledge and practice of advanced manual and machine dermal therapies. This will consist of micro-dermabrasion and clinical lymphatic drainage. The basis of these therapies will be presented in the Diploma program and consolidated under the subject, normally all components of assessment must be attempted and passed. Failed assessment items (assessment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%.  
**Subject Hours** Two hours per week or equivalent for one semester comprising lectures and tutorials.  
**Assessment** One written assignment (1500 words) (40%); one 2-hour examination (60%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (assessment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.
Learning Outcomes Students will be able to work more cohesively in their respective workplace with a greater understanding of themselves and others. Students will be better able to cope with issues arising with clients due to understanding the impact of stress on cognitive processes, along with how to refer that client to others, or arranging emergency help.

Content This unit will look at various aspects of how our mental state and that of others can effect our workplace environment. Through a better understanding of ourselves, students will be able to gather a better understanding of others. Students will not only examine different psychological techniques but also what to do when various issues arise. Students will consider various psychological conditions that affect workplace functioning such as stress and horizontal violence. They will also examine the psychological conditions that clients may present with such as body dysmorphic disorders, terminal illness, personality disorders and how to deal with them.


Class Contact 3 hours per week or equivalent
Assessment 45% Reflective journals (2500 words – Students are to present a reflective journal encompassing their opinions and related arguments or agreements to each lecture) 55% Protocol workbook (2500 words – students are to select five issues covered in the lectures and prepare a standard protocol on how to address these issues in the workplace setting).

HHD3124 INDUSTRY PRACTICUM 2
Campus City King, City Flinders, Queen St
Prerequisites Satisfactory completion of all the Diploma TAFE units (or equivalent); Industrial Practice 1. Co-operative placement.
Learning Outcomes Students will feel greater confidence in the application of their skills obtained after completion of Industrial Practice 1 (assessed via situation analysis report). Students will be further exposed to a wide range of clients and procedures so that they feel more confident in dealing with future clients (assessed via student portfolio).
Content In this subject students will explore the workplace context by examining the organisational structure and identifying the role as active and accountable employees within industry. Students will develop an understanding of the key issues relating to the transition to the professional workplace, including workplace culture, professional etiquette and communications. They will gain a better understanding as to what techniques they can apply and experiential learning in how to apply them. Students will also be able to reflect on the integration of the academic and workplace learning.
Required Reading School developed manual
Recommended Reading None
Class Contact 12 hours per week within an approved clinical setting
Assessment None

HHD3134 DERMAL SCIENCE
Campus City King, City Flinders, Queen St
Prerequisites Dermal Anatomy and Physiology
Learning Outcomes On successful completion of this unit the student will be able to: Discuss the embryological development of the skin and its appendages The student will gain a deeper knowledge of the skin (from previous units) that will allow them to better understand the application and effects of dermal treatments. Knowledge of the principles of wound healing will enable the student to treat conditions with more confidence and better outcomes. The student will feel more able to identify and understand a variety of pathological and physiological events, which a person under their care may be experiencing.
Content The subject will introduce students to theoretical aspects of integumentary system embryology, structure and function, patho-physiology, immunology, cellular damage, allergy, inflammation, wound repair, neoplasia and tissue responses to injury relevant to the practice of Dermal Therapy. The subject will provide important underpinning knowledge that students will require in their practical applications throughout the degree program. Knowledge to be developed will include: wound repair, integumentary system biology, embryology and biology, inflammatory response and associated damage, infection, immunity and allergy and neoplasia.
Assessment 30% Reading exercises (Composed on a series of short answer questions relating to selected journal articles) 35% Assignment (Essay 2000 words) 35% Written Examination (2.5 hours duration)

HHD3174 CLINICAL DIAGNOSIS & MANAGEMENT 4
Campus City Flinders, Off Campus
Prerequisites HHD2273 Clinical Diagnosis & Management 3; or equivalent.
Co-requisites HYH3174 Pathology 4; or equivalent.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Use at proficiency level the vocabulary of the musculoskeletal examination;
2. Discuss the fundamentals of history as they pertain to musculoskeletal disease;
3. Explain key diagnostic procedures, tests and investigations employed in rheumatology;
4. Conduct a competent examination of the following joints and their associated musculature and accessory structures such as the knee, shoulder, elbow, wrist, hand, hip, knee, ankle and foot;
5. Use a diagnostic algorithm to arrive at a differential diagnosis;
6. Recognise the main classes of bone tumours and their specific clinical details and importance;
7. Integrate knowledge previously presented in anatomy and physiology and apply this integrated knowledge to the living body;
8. Demonstrate competent usage of the basic tools associated with clinical examinations of the shoulder, elbow, wrist, hand, hip, knee, ankle and foot.

Content The clinical examination of the musculoskeletal system of the human body in detail. Students will be specifically trained in the advanced examination of the joints and the associate muscles at the shoulder, elbow, wrist, hand, hip, knee, ankle and foot. Key diagnostic procedures, tests and investigations associated with musculoskeletal diagnosis will be discussed. Students will be trained in the use of a detailed diagnostic algorithm for the diagnosis of musculoskeletal conditions. These skills will be contextualised in terms of the main diseases affecting the musculoskeletal system. Skills required for advanced usage of typical equipment employed in the musculoskeletal examination will be refined.


SCHOOL OF HEALTH SCIENCES
HHD320 CLINICAL PRACTICE 2
Campus City King, St Albans
Prerequisite(s) HHD3100 Clinical Practice 1; or equivalent.
Content In this subject students will begin to focus on a specific range of medical and therapeutic procedures with a view to specialisation of peri-operative support using clinical dermal therapy techniques.
Assessment One practical examination (40%); one 2-hour written examination (60%).

HHD3204 LASER SAFETY AND LIGHT BASED TREATMENTS
Campus City King, City Flinders, Queen St
Prerequisites HHD3134 Dermal Science
Learning Outcomes The student will feel more confident in the understanding of how certain low level laser based treatments work and where it is appropriate, how to perform them. Knowledge of Australian standards in laser safety will enable the student to perform laser treatments and manage laser operational settings with a greater degree of safety and confidence. The student will gain experience in the use and build their knowledge of class 3 lasers and photodynamic therapy.
Content This subject covers Australian standards in laser safety and where applicable relevant government laws relating to the use of cosmetic lasers. Students will also be given an introduction on how lasers work, leading to practical applications of treating various skin conditions using low level lasers. Other newer light based treatments such as phototherapy and infra-red based therapy will also be discussed with regard to safety, efficacy and dermal applications. Required ReadingAS/NZS 4173:2004 Guide to the safe use of lasers in health care Standards Australia Henderson. R., & Schulmeister. K., Laser Safety. Institute of Physics Publishing
Recommended Reading None
Class Contact 3 hours per week or equivalent
Assessment 30% Practical Assessments (Students are to perform selected procedures taught within the unit to professional dermal therapist standards) 40% Written Examination (2.5 hours duration) 30% Reading exercises (Composed on a series of short answer questions relating to selected journal articles)

HHD3214 ELECTRICALLY BASED DERMAL TREATMENTS
Campus City King, City Flinders, Queen St
Prerequisites HHD2204 Dermal Anatomy and Physiology and HHD3134 Dermal Science, or equivalents.
Learning Outcomes The student will feel confident in the understanding of how certain electrically based dermal techniques work and where appropriate, how to perform them. Knowledge of electrical theory, as it applies to electrotherapy procedures used in dermal therapies, will enable the student to perform and manage these modalities with greater safety and confidence.
Content This unit will enable on-going evaluation of treatments in progress and final evaluation of completed treatments. Practical application of advanced dermal treatment techniques will be undertaken. Specific techniques used to support the clinical procedures will be used this includes a variety of electrotherapies. This unit will also build upon the underpinning knowledge of the nervous system, fluid electrolyte and acid base balance and electrical theory required to safely and effectively perform electrotherapy procedures.
Class Contact 3 hours per week or equivalent
Assessment 30% Practical Assessments (Students are to perform selected procedures taught within the unit to professional dermal therapist standards) 30% Assignment (Essay 2000 words) 40% Written Examination (2.5 hours duration)

HHD3220 DERMAL TECHNIQUES 2
Campus St Albans, City King
Prerequisite(s) HHD3110 Dermal Techniques 1; or equivalent.
Content This subject will build on the knowledge and techniques covered in Dermal Techniques 1. Students will undertake study in the basics of low and high level laser together with practical applications. This will include an introduction to laser and light physics, laser & light tissue interaction, laser safety, introduction to intense pulsed light, resurfacing lasers, laser based treatment of hair, practical aspects of light based laser removal, light based treatment of vascular & pigmented lesions and tattoos, photo rejuvenation, practical aspects of photo rejuvenation and light based treatment of acne. A number of case studies based on treatment planning, skin analysis, acne management, scar management and ageing skin management will also be presented. They will apply a range of techniques and treatment regimes to affect successful outcomes for the client. Students will also be expected to comment on the psychological and physiological needs of the client.
Subject Hours Three hours per week for one semester comprising lectures, tutorials and laboratory sessions.
Assessment Practical assessment (50%); assignment (2000 words) (30%); final examination (20%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (essay) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%. This subject is a hurdle requirement.

HHD3224 DERMATOLOGY
Campus King Street campus, Queen St campus, Flinders Lane campus
Prerequisites HHD3134 Dermal Science, or equivalent.
Learning Outcomes On successful completion of this unit the student will be able to:
• Compare the chemical formulas, properties and actions of a range of preparations used by dermal clinicians
• Discuss issues of toxicology as they relate to the treatment of dermatological conditions and the use of chemicals in dermal techniques.
• Discuss the aetiology, epidemiology, clinical features, differential diagnosis and treatments for a range of dermatological diseases and disorders.
• Recognise a range of dermatological conditions.
• Discuss the role of a dermal clinician in the treatment of a range of dermatological conditions.
The student’s confident in the understanding of the different types of skin conditions and how various substances interact with the skin will increase from that covered ‘Skin Science’. An emphasis will be placed on black-and-white understanding of non-infectious conditions. The student will be taught when to provide supportive care and when to immediately refer to a medical practitioner for further treatment. The student will be able to provide clients with more appropriate treatments and skin care regimes by having a greater understanding of the skin and the effects of the various types of ingredients used in skin care products.

**Content**
This subject will build on the knowledge base covered in Dermal Anatomy and physiology; Dermal science by further researching cosmetic dermatology, specifically in the area of dermatological conditions that develop as a result of cosmetic substances put on the skin. This subject will also cover the management of non-infectious dermatological conditions such as dermatitis, eczema, psoriasis, benign and pre-malignant skin lesions and skin cancers. A range of vascular and connective tissue disorders will also be considered. This will lead into related pharmacology and toxicology areas and will include studies of the effects of various drugs and chemicals, both topical and oral, on the skin. Students will also be expected to investigate the effects on the skin of various cosmetic ingredients especially those in chemical peels and herbal preparations.

In addition to this, students will be expected to become familiar with the Therapeutic Goods Act and other legislation relevant to their practical work. This subject will also expand the knowledge gained in Dermal Anatomy and physiolo, about the identification and biochemistry of micro-organisms, specifically viruses and bacteria.

**Required Reading**

**Recommended Reading**

**Class Contact** 4 hours per week or equivalent

**Assessment**
30% Class presentation (A 10 minute presentation to the class on a set topic); 35% Assignment (Essay 2000 words); 35% Written Examination (2.5 hours duration)

**Prerequisites**
HHD2204 Dermal Anatomy and Physiology and HHD3134 Dermal Science, or equivalent

**Learning Outcomes**
This subject will build on the knowledge base covered in Dermal Anatomy and physiology; Dermal science by further researching cosmetic dermatology, specifically in the area of dermatological conditions that develop as a result of cosmetic substances put on the skin. This subject will also cover the management of non-infectious dermatological conditions such as dermatitis, eczema, psoriasis, benign and pre-malignant skin lesions and skin cancers. A range of vascular and connective tissue disorders will also be considered. This will lead into related pharmacology and toxicology areas and will include studies of the effects of various drugs and chemicals, both topical and oral, on the skin. Students will also be expected to investigate the effects on the skin of various cosmetic ingredients especially those in chemical peels and herbal preparations.

In addition to this, students will be expected to become familiar with the Therapeutic Goods Act and other legislation relevant to their practical work. This subject will also expand the knowledge gained in Dermal Anatomy and physiolo, about the identification and biochemistry of micro-organisms, specifically viruses and bacteria.

**Required Reading**

**Recommended Reading**

**Class Contact** 4 hours per week or equivalent

**Assessment**
30% Class presentation (A 10 minute presentation to the class on a set topic); 35% Assignment (Essay 2000 words); 35% Written Examination (2.5 hours duration)

**HHD3234 PEELS PROCEDURE**
Campus City King, City Flinders, Queen St

**Prerequisites**
HHD2204 Dermal Anatomy and Physiology and HHD3134 Dermal Science, or equivalent

**Learning Outcomes**
The student will feel confident in the understanding of how peels and microdermabrasion techniques work and where appropriate how to perform them. Knowledge of chemistry, pharmacology and toxicology as it applied to chemical preparations used in dermal therapies will enable the student to use these preparations with greater confidence.

**Content**
This subject expands on the dermal techniques covered in Electrically Based Dermal Treatments and sequencing as part of case management. This will occur through the on-going evaluation of treatments in progress and final evaluation of completed treatments. Practical application of advanced dermal treatment techniques will be undertaken. Specific techniques used to support the clinical procedures will be used this includes chemical peels and microdermabrasion. This unit will also cover the underpinning knowledge of chemistry, pharmacology and toxicology required to safely and effectively perform procedures using chemical preparations.

**Required Reading**

**Recommended Reading**

**Class Contact** 3 hours per week or equivalent

**Assessment**
40% Practical Assessments (Students are to perform selected procedures taught within the unit to professional dermal therapist standards) 40% Written Examination (2.5 hours duration) 20% Reading exercises (Composed on a series of short answer questions relating to selected journal articles)

**HHD3270 PROFESSIONAL ETHICS**
Campus City Flinders

**Prerequisites**
HHO3175 Osteopathic Science 5; or equivalent.

**Co-requisites**

**Learning Outcomes**
On successful completion of this unit, it is expected that students will be able to:
1. Discuss the legal framework in Australia in which osteopathy operates;
2. Evaluate the place of osteopathy within the Australian and other healthcare systems;
3. Debate the ethical requirements of practice in a multicultural society;
4. Evaluate various Boards’ and Associations’ codes of conduct;
5. Discuss the requirements for research and business ethics.

**Content**

**Required Reading**

**Recommended Reading**

**Content**
This subject builds on the knowledge base covered in Dermal Techniques 1 and 2 by further developing treatment planning and sequencing as part of case management. This will occur through the on-going evaluation of treatments in progress and final evaluation of completed treatments. Practical application of advanced dermal treatment techniques will be undertaken. Specific techniques used to support the clinical procedures will be used this includes chemical peels and microdermabrasion. This unit will also cover the underpinning knowledge of chemistry, pharmacology and toxicology required to safely and effectively perform procedures using chemical preparations.

**Required Reading**

**Recommended Reading**

**Class Contact** 3 hours per week or equivalent

**Assessment**
One 20-minute quiz (pass/fail formative assessment); one case analysis assignment (2000 words) (100%).

**CGAs**
P3, I3, W3, A3, C3, D3

**HHD3330 DERMAL TECHNIQUES 3**
Campus St Albans or City King.

**Prerequisite(s)**
HHD3220 Dermal Techniques 2; or equivalent.

**Content**
This subject builds on techniques covered in Dermal Techniques 1 and 2 and by further developing treatment planning and sequencing as part of case management. This will occur through the on-going evaluation of treatments in progress and final evaluation of completed treatments. Practical application of advanced dermal treatment techniques will be undertaken. Specific techniques used to support the clinical procedures will be used this includes micro-pigmentation, laser and further practice in laser therapy, micro-dermabrasion, specialised lymphatic drainage massage and chemical peels. Further study into the pharmacology of topical medication and use of drugs/chemicals, cosmetic chemistry, factor of penetration, active ingredients, and the action of skin peels. Students will be expected to work with a specialised practitioner as a mentor to support this arrangement.

**Recommended Reading**

**Subject Hours**
Three hours per week for one semester comprising lectures, tutorials and laboratory.

**Assessment**
Presentation of case study. 60%; final exam, 40%. Students must satisfactorily complete each component of the assessment in order to gain a pass in the subject.
3. Apply knowledge in clinical neurology to clinical cases commonly seen in osteopathic practice (module 1);
4. Identify normal and pathological anatomy on diagnostic images (module 2);
5. Competently read radiographs, MRI, CT, ultrasound, bone scans, and other diagnostic images for the diagnosis of congenital anomalies and normal variants, traumatic injuries, scoliosis and infections (module 2);
6. Recognise particular disease states from the identification of abnormalities on scans (module 2).

Content
This unit comprises two modules: Module 1: Clinical Neurology; and Module 2: Diagnostic Imaging. The aims of this unit are to develop in students an integrated understanding of the nervous system, neuroanatomy and neurophysiology, neural function and the ability to apply this knowledge to clinical cases; and to instruct students in the reading of radiographs, MRI, CT, ultrasound, bone scans, and other diagnostic images for the diagnosis of congenital anomalies and normal variants, traumatic injuries, scoliosis and infections.

Required Reading

Class Contact
Ninety-six (96) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions will have a hurdle requirement of at least 80% attendance.

Assessment
One mid-semester MCQ examination (Clinical Neurology 5%) One 1-hour laboratory examination (Clinical Neurology, 15%, hurdle requirement); one 15-minute oral examination (Diagnostic Imaging, 25%, hurdle requirement); one 1-hour written slide examination (Diagnostic Imaging, 25%, hurdle requirement); one 3-hour final written examination (Clinical Neurology, 30%, hurdle requirement).

HHD4204 DERMAL CLINICAL PRACTICE 2
Campus City King, City Flinders, Queen St
Prerequisites Dermal Clinical Practice 1, or equivalent.

Learning Outcomes
The student will have a greater understanding of what occurs during more common medical procedures and what First Aid to apply if complications arise while that person is under their care. The student will gain knowledge and techniques for managing latex allergy within a clinical setting. Developing an understanding of sterile gloving and gowning procedures will allow the student to operate more confidently in a medical setting. The student will be able to perform the basic record keeping requirements of a medical setting.

Content
In this subject students will begin to focus on a specific range of medical and therapeutic procedures with a view to specialisation of practice. Support using clinical dermal therapy techniques. Topics include: procedures in reconstructive, plastic and cosmetic surgery; complications of reconstructive, plastic and cosmetic procedures; latex allergy; gloving and gowning; managing fragile skin and record keeping.

Required Reading

Recommended Reading

HHD4214 NUTRITION AND DERMAL THERAPIES
Campus City King, City Flinders, Queen St
Prerequisites Dermatology, or equivalent.

Learning Outcomes
On successful completion of this unit, it is expected that students will be able to: to be aware of various common conditions, which may result from, or result in, important nutritional imbalances, which can adversely affect skin; recall and discuss the nutritional implications of various eating disorders; suggest appropriate client referral to specialist health practitioners; identify factors that promote nutritional well-being, conditions in which it is appropriate to provide nutritional advice to clients and the identification of situations in which is necessary to refer clients to specialist health practitioners.

Content
In this subject students will further their understanding of the role of various vitamins and minerals food groups and nutritional supplements in promoting well-being. Students will also study the beneficial and deleterious effects of various diets on skin health and the relationship of nutritional eating patterns to conditions such as anorexia and bulimia. Topics in this subject will include carbohydrate, lipids, proteins, energy balance, water soluble, vitamins, fat soluble vitamins, minerals, dieting, how to recognise the relationship between dieting disorders and skin conditions, referrals, nutritional status of the skin, discussions on popular diets, advantages and disadvantages, client management of specific dietary needs in skin disorders, and the effects of excessive amounts of vitamins and minerals.

Required Reading

Recommended Reading
current readings from popular press.

Class Contact
3 hours per week or equivalent for one semester comprising lectures and workshops. Students should reasonably expect to devote additional private contact hours of at least 2 times more than the stipulated class contact hours.

Assessment
40% Assignment (Essay 2000 words) 50% Written Examination (2.5 hours duration)

HHD4224 DERMAL CLINICAL PRACTICE 3
Campus City King, City Flinders, Queen St
Prerequisites Dermal Clinical Practice 1, or equivalent.

Learning Outcomes
Students will be able to apply dermal therapies theory and clinical practice to cases typically presenting at a clinic. Students will also be able to communicate case material in a professional style sufficient to facilitate effective handover.

Content
This unit integrates dermal therapies theory and practice and gives students the opportunity to enhance their understanding by applying their skills in the clinical setting. The unit reinforces aspects of aseptic procedures, history taking, principles of diagnosis, treatment protocols, the range of treatment skills covered in the course thus far, legal issues and interpersonal and professional communication skills.

Required Reading

Class Contact
3 hours per week or equivalent

Assessment
50% Practical Assessments (Students are to perform selected procedures taught within the unit to professional dermal therapist standards) 50% Assignment (Essay 2000 words) 60% Written Examination (2.5 hours duration)

HHD4234 PROFESSIONALISM IN DERMAL PRACTICE
Campus City King, City Flinders, Queen St
Prerequisites Workplace Issues in Dermal Practice

Learning Outcomes
The student will feel more confident in the understanding of what the course has given them, and how to apply that knowledge. Students will be better able to communicate any present issues related to the workplace and the general public. Legal and professional ethical issues related to the industry will also be considered.

Content
This unit is an integrating subject for the course and has been designed to provide students with a framework to link the main
elements of the course. The subject enables students to enhance their critical thinking and integration of knowledge. Particular emphases will be given to 1) ethical and legal issues and dilemmas confronting different therapies and 2) networking with medical practitioners and other health professionals including referrals and approaches to establishing effective and safe working relationships. 3) Presenting research findings and clinical results.

**Content** This unit comprises three modules: Module 1: Neurological Assessment; Module 2: Diagnostic Imaging 2; and Module 3: Pharmacology 1. Module 1: Neurological Assessment concentrates on a detailed clinical examination of the nervous system. Students will be trained in the advanced examination of the following neurological systems, structures and conditions: sensory, motor, cranial nerves, cerebral cortex, basal ganglia, cerebellum, upper and lower motor neurons, skeletal muscles, nerve damage in the upper and lower limb. The study of the key diagnostic procedures, tests and investigations used to diagnose pathology of the nervous system. The performance of a rapid, clinical, neurological screening test. The basic algorithm employed in the diagnosis of neurological disease. Advanced training in the use of equipment employed in the neurologically clinical examination.

**Pharmacology 1.** Module 1: Neurological Assessment concentrates on the study of the key diagnostic procedures, tests and investigations used to diagnose pathology of the nervous system. The performance of a rapid, clinical, neurological screening test. The basic algorithm employed in the diagnosis of neurological disease. Advanced training in the use of equipment employed in the neurologically clinical examination. Module 2: Diagnostic Imaging 2 extends the reading of radiographs, MRI, CT, ultrasound, bone scans, and other diagnostic images for the diagnosis of arthritides, primary and secondary tumours, tumour-like disorders, metabolic, vascular, and endocrine diseases. Information on diagnostic images will include normal and pathological anatomy, and pathological features associated with particular disease states. Module 3: Pharmacology 1 introduces the development and testing process for drugs. Trends in drug research. The approval process and the Pharmaceutical Benefits Scheme. Generic drugs versus brands. Reasons for differences in prescribing habits. Pharmacokinetics, pharmacodynamics and other pharmacological terms and concepts. Toxicology issues. Overview of major common drugs seen in practice, with emphasis on the implications for the osteopath; drugs used for the control of pain, inflammation, and for treatment of arthritic conditions, including opioid and non-opioid analgesics, NSAIDs, corticosteroids and DMARDs. Oral contraceptives and derivatives such as HRT. Drugs used in infection control; antibiotics, antivirals and antifungals.

**Recommended Reading**

- Electronic media

For information on updates on PBS listings, visit the Department of Health Web site, http://www.health.gov.au/pbs

For information on most drugs as provided by MIMS, visit the CMPMedica, Australia Web site, http://www.mymdr.com.au

For information on consumer medicine information and product information, visit the Royal Australasian College of General
Fig. J. D. (1995). Neuroanatomy (2nd ed.). Baltimore, MD: Williams & Wilkins.
Class Contact Eighty four (84) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.
Assessment One 15-minute final oral examination (Diagnostic Imaging, 25%, hurdle requirement); one 15-minute final practical examination (Neurological Assessment, 25%, hurdle requirement); one 1-hour written examination (Diagnostic Imaging, 25%, hurdle requirement), one 1.5-hour written (MCQ format) examination (Pharmacology, 25%, hurdle requirement).

HHD5135 SPECIALISED DERMAL ANATOMY AND PHYSIOLOGY
Campus King Street campus, Queen St campus, Flinders Lane campus
Prerequisites Nil
Co-requisites Nil
Learning Outcomes On successful completion of this unit the student will be able to:
• Discuss the various anatomical features that may influence the use and positioning of injectable substances. Discuss the micro-structure of skin and sub-cutaneous structures as they relate to the use and application of injectables, scar revision and lymphedema techniques. Identify possible causes of infection and pathological processes related to the use of injectables, scar revision and lymphedema techniques
Content This subject will act as the basis for underpinning specific anatomy and physiology needed throughout the rest of the program. More specifically there will be and greater understanding of vasculature, the nervous system, muscles and connective tissue structure both generally and to a greater depth in the craniofacial region. Pathology of both acute and chronic conditions will be covered together with an advanced level of microbiology with specific emphasis on infection control and pathogens. The emphasis of all this information will be in relation to the techniques covered in this course.
Class Contact 6 hours per week or equivalent
Assessment 60% Written Examination (3 hours duration) 40% Reading exercises (Composed on a series of short answer questions related to selected journal articles)

HHD5145 ADVANCED DERMAL APPLICATIONS 1
Campus King Street campus, Queen Street campus, Flinders Lane campus
Prerequisites Nil
Co-requisites Nil
Learning Outcomes On successful completion of this unit the student will be able to:
• Discuss the theoretical consideration of performing injections.
• Explain and demonstrate the basic technique of injecting into the cutaneous and sub cutaneous regions Discuss the theoretical considerations of advanced machine based Endermor –therapy treatments. Discuss the health and hygiene requirements for performing injections. Discuss the hazards of performing advanced machine based Endermor –therapy treatments and injections
Content In this subject students will learn the theoretical dimensions of certain advanced dermal techniques. Knowledge to be developed in this unit includes the theory needed to perform injections relating to both dermal fillers, restorative and corrective treatments. Also covered is the theory behind the assessment for and application of advanced machine based Endermor –therapy based treatments for scar revision and burns therapy.
Class Contact 6 hours per week or equivalent
Assessment 50% Practical Assessments (Students are to perform procedures taught within the unit to dermal therapist standards) 30% Assignment (Essay on a topic set by the lecturer 2000 words) 20% Written Examination (Combination of MCQ and SA)

HHD5155 PROFESSIONAL DERMAL ISSUES 1
Campus King Street campus, St Albans campus, Flinders Lane campus
Prerequisites Nil
Co-requisites Nil
Learning Outcomes The student will be able to identify the main factors that determine beauty in humans and why these factors are relevant, they will then be able to make better judgements on what is aesthetically pleasing and apply those concepts to their treatments. Students will also have a much fuller understanding of health laws and what their limitations are to these new treatments that they will be providing
Content This subject will consider the idea of what is generally considered aesthetic pleasing in society. Cultural differences, biological implications, psychological influences and mathematical and proportional concepts impacting on the idea of beauty will be covered. Discussions on decisions to recommend treatment and when to refuse treat and how to approach these difficult areas will also be considered. Ethics in overuse of aesthetic treatments will also be considered. Legal issues regarding these new forms of treatment and record keeping, will also be covered so that the student will know what legal parameters they can work in and how to keep up to date with any changes in law.
Recommended Reading To be advised by the lecturer.
Class Contact 3 hours per week or equivalent + online discussions
Assessment 30% Assignment (Essay on a topic set by the lecturer 2000 words) 40% Written Examination (Combination of MCQ and SA) 30% Class presentation (A 10 minute presentation to the class on a set topic)

HHD5165 ADVANCED CLINICAL PRACTICE 1
Campus King Street campus, Queen Street campus, Flinders Lane campus
Prerequisites Nil
Co-requisites Nil
Learning Outcomes The student will feel confident in applying the techniques covered, in a clinical setting. Students will be able to apply their knowledge of infection control, record keeping and other clinically related matters.
Content In this unit student will undertake a series of lectures in the beginning of the semester to prepare them for later work in the teaching clinic. Record keeping, infection control and clinical work practices will be covered. Students will then be able to provide services to the public
to apply the techniques that they have been taught within the program. Students will begin the process of monitoring a case so that they can write up a case report in the following unit.

**Required Reading** Wellsby, P. D. (2002). Clinical History taking and examination: Elsevier Health Sciences

**Recommended Reading** To be advised by the lecturer.

**Class Contact** 3 hours per week or equivalent + practice

**Assessment** 50% Practical Assessments (Students are to perform procedures taught within the unit to dermal therapist standards) 50%

**Assignment** (Record keeping information, 2000 words)

**HHD5187 CLINICAL DIAGNOSIS AND MANAGEMENT 7**

**Campus** St Albans, City Flinders, Off Campus

**Prerequisites** HHD4286 Clinical Diagnosis & Management 6; or equivalent.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Distinguish amongst normal changes and typical and atypical pathological changes on diagnostic images (module 1);
2. Determine when diagnostic images are clinically indicated (module 1);
3. Interpret typical and atypical diagnostic images in a clinical setting (module 1);
4. Integrate typical and atypical diagnostic images with other clinical information to guide clinical decision making (module 1);
5. Describe the public and private health system costs associated with diagnostic images (module 1);
6. Interpret clinical signs and symptoms pertinent to conditions typically seen in paediatrics, obstetrics, otolaryngology, psychiatry, and to serious and specific disorders in obstetrics, paediatrics and psychiatry (module 2);
7. Interpret clinical tests and special investigations commonly used in the diagnosis of conditions typically seen in obstetrics, paediatrics and psychiatry (module 2);
8. Explain the conventional medical management of paediatric, obstetric, ENT and psychiatric conditions typically presenting in osteopathic practice (module 2);
9. Explain serious and common disorders in obstetrics, paediatrics and psychiatry may impact on osteopathic practice (module 2);
10. Discuss potential problems in osteopathy for the professional and the profession, and explore different ways of effectively responding to those problems (module 2);
11. Evaluate the role of nutrients in health and disease (module 3);
12. Recognize and respond appropriately to patients with nutritional deficiencies and eating disorders (module 3);
13. Explain the impact of nutritional status in specific clinical conditions relevant to the practising osteopath (module 3);
14. Relate the methods used for assessing food safety and the principles of food hygiene (module 3);
15. Discuss the actions, interactions and adverse effects of the major drugs used in the treatment of skin conditions and respiratory conditions. Hypnotics, anxiolytics, antidepressants and other drugs used in psychiatric disorders. Drugs used for treating hypertension and angina; adrenoreceptor blockers, anticoagulants and lipid-lowering drugs. Other drugs with vascular effects: 5-HT agonists and sympathomimetics. Treatment of central nervous disorders like epilepsy and Parkinsonism. Treatment of diabetes mellitus. Thyroid and other hormones used therapeutically. Drugs used in the treatment of neoplasms. Recreational drugs and effects of substance abuse.


Students should have access to a copy of the most recent MIMS or the Australian medicines handbook available from Australian Medicines Handbook Web site, http://www.amh.org.au


For information on drug recalls and safety, visit the Therapeutic Goods Administration (TGA) Web site, http://www.tga.gov.au

**Assessment** One 15-minute final oral examination (Dietetic Imaging, 5%; hurdle requirement); one 1-hour final written examination (Diagnosis Imaging, 5%; hurdle requirement); four (4) group-written cases (Disease and Management, 25%, hurdle requirement); two (2) written assignments (2000 words each) (Nutrition and Diet, 10% each, total 20%); one 3-hour final written open-book examination (Disease and Management, 25%, hurdle requirement); one 2-hour final written examination (Pharmacology, 20%).

**HHD5235 DERMAL PHARMACOLOGY**

**Campus** King Street campus, Queen Street campus, Flinders Lane campus

**Prerequisites** Nil

**Co-requisites**

**Learning Outcomes** On successful completion of this unit the student will be able to:

1. Discuss in detail skin and its underlying structures biochemistry and issues of chemical interaction of substances introduced to the skin and sub-cutaneous structures. Discuss issues of toxicity related to the use of substances, such as injectables in advanced dermal therapies. To explain the process and issues relating to percutaneous absorption. To discuss and differentiate between the chemical composition of substances used in advanced dermal therapies.
Content This subject will give the students a much greater understanding of the chemistry and pharmacology from that introduced at the undergraduate level. Various forms of chemicals and drugs will be on patients or that patients may already be taking will be considered with regard to the advanced dermal therapies they will be applying. Knowledge to be developed will be chemistry of substances used in advanced dermal therapies, skin and underlying biochemistry, percutaneous absorption, toxicology and chemical interactions.


Class Contact 6 hours per week or equivalent Assessment 60% Written Examination (3 hours duration) 40% Reading exercises (Composed on a series of short answer questions relating to selected journal articles)

HHD5245 ADVANCED DERMAL APPLICATIONS 2

Campus King Street campus, Queen Street campus, Flinders Lane campus

Prerequisites Nil

Co-requisites

Learning Outcomes On successful completion of this unit the student will be able to: Discuss issues involved with the use of injectables in dermal techniques. Discuss the affects of using injectable substances for aesthetic purposes. Discuss the affect of advanced machine based Endermo –therapy treatments. Demonstrate an understanding of the application of advanced machine based Endermo –therapy treatments for lymphedema, post surgery applications and other related modalities Demonstrate an understanding of the use of injectable substances in advanced dermal therapies.

Content This subject will build on and extend the knowledge gained in advanced dermal therapies 1. Knowledge to be developed will include practical application of advanced machine based Endermo –therapy treatments and injectables for cosmetic, restorative and corrective purposes. Knowledge of the hazards and contraindications associated with the use of injectables in advanced dermal techniques will be covered. Treatment protocols will be developed for the use of these advanced dermal techniques.


Class Contact 6 hours per week or equivalent Assessment 50% Practical Assessments (Students are to perform procedures taught within the unit to dermal therapist standards) 30% Assignment (Essay on a topic set by the lecturer 2000 words) 20% Written Examination (Combination of MCQ and SA)

HHD5255 PROFESSIONAL DERMAL ISSUES 2

Campus King Street campus, Queen Street campus, Flinders Lane campus

Prerequisites Nil

Co-requisites

Learning Outcomes The student will be better able to communicate with clients that may have suffered a severe trauma and understand the psychological impact such an event would have on them. Students will be further able to discuss cases in a professional forum and have a greater understanding of what are professional standards of sharing information. Students will be able to write case reports at a medico-legal standard.

Content In this unit students will consider the psychological impact a severe trauma has on peoples cognition when that trauma greatly affects their appearance. Other related psychological conditions will also be considered. Better communication and empathy will be addressed to help deal with these situations. Discussions of specific cases and various professional approaches will also be discussed, highlighting a best practice model. Students will also go through the process of writing a case report based on these new treatments for a private health insurance company or medical practitioner.


Recommended Reading To be advised by the lecturer.

Class Contact 3 hours per week or equivalent + online discussions Assessment 30% Assignment (Essay on a topic set by the lecturer 2000 words) 40% Case Report (Medical Legal case report 2000 words) 30% Case Critique (students are to critique a selected case 1000 words)

HHD5265 ADVANCED CLINICAL PRACTICE 2

Campus King Street campus, Queen Street campus, Flinders Lane campus

Prerequisites Nil

Co-requisites

Learning Outcomes The student will feel even more confident in applying a wider range of techniques, in a clinical setting. Students will be able to further their knowledge of infection control, record keeping and clinically related matters.

Content In this unit student will undertake a series of lectures in the beginning of the semester to prepare them for their written case study, (the case being obtained from the teaching clinic). Students will continue to deepen their knowledge on record keeping, infection control and clinical work practices. Students will then provide a wider range of services to the public to apply the techniques that they have been taught within the program. Students will continue the process of monitoring a case so that they can write up a case report.


Recommended Reading Nil

Class Contact 3 hours per week or equivalent + practice Assessment 50% Practical Assessments (Students are to perform procedures taught within the unit to dermal therapist standards) 50% Assignment (Case study, 3000 words)

HHD5288 CLINICAL DIAGNOSIS AND MANAGEMENT 8

Campus City Flinders, Off Campus.

Prerequisites HHD5187 Clinical Diagnosis & Management 7; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Elicit and interpret clinical signs and symptoms pertinent to conditions typically seen in gerontology, and to more serious and specific disorders in and musculoskeletal medicine (module 1);
2. Interpret clinical tests and special investigations commonly used in the diagnosis of conditions typically seen in gerontology, and musculoskeletal medicine (module 1);
3. Generate a primary diagnosis and a list of differential diagnoses consistent with typical presentations common in gerontology, and musculoskeletal medicine (module 1);
4. Explain the medical management of various conditions typically presenting in osteopathic practice (module 1);
5. Discuss how the serious and common disorders and the specialized areas of medical practice (gerontology, and musculoskeletal medicine) may impact on osteopathic practice (module 1);
6. Apply knowledge, appropriate communications skills and critical reasoning skills consistent with professional osteopathic standards expected during patient consultations (module 1);
7. Discuss potential professional problems and explore different ways of effectively responding to them (module 1);
8. Function as practitioners within a multi-disciplinary health care team (module 1);
9. Function as practitioners who can work independently within the scope of osteopathic practice (module 1);
10. Evaluate the role of nutrients in health and disease (module 2);
11. Explain the impact of nutritional status in specific clinical conditions relevant to the practising osteopath (module 2);
12. State current recommendations for the nutritional management of some common and serious disease states (module 2);
13. Discuss nutritional issues relevant to children, pregnant women and elderly adults (module 2).

Content This unit comprises two modules: Module 1: Diagnosis and Management – Problem Based Learning 2; and Module 2: Nutrition and Diet.

SCHOOL OF HEALTH SCIENCES
Module 1: Diagnosis and Management – PBL 2 discusses relevant issues and clinical presentations of conditions typically seen in gerontology, clinical tests and conventional medical management of those conditions; specific areas in musculoskeletal medicine and gerontology that impact on osteopathic diagnosis and management. Module 2: Nutrition and Diet considers nutrition in pregnancy, paediatric nutrition, fad diets, traditional cuisines, sports nutrition, giving dietary advice, nutrition and cancer, nutrition and arthritis, food law and labelling, food allergy and intolerance, nutrition issues for women, nutrition and the elderly.

Required Reading


Class Contact

Seventy Two (72) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and self-directed learning.

Assessment

One written assignment (1500 words) (Nutrition and Diet, 20%); one written assignment (2000 words) (Nutrition and Diet, 30%); four (4) group written cases (Diagnosis and Management, 25%, hurdle requirement); one 3-hour final written open-book examination (Diagnosis and Management, 25%, hurdle requirement).

HHG5115 PHILOSOPHICAL CONCEPTS OF HEALING

Campus St Albans

Prerequisite(s) Nil

Content

Approaches to healing throughout the world are embedded in notions of reality, truth, and values about health and illness. The subject explores the philosophies that underpin the major traditions of the health and healing. Students are provided with the opportunity to explore and critically appraise the various philosophies. Areas of inquiry will include the general principles of: Oriental Medicine: Chinese and Japanese healing; Ayurveda and Yoga: Indian and Pranic healing; Naturopathy: European natural therapy; Australian Aboriginal healing; Western healing; Shamanistic healing practices. The opportunity to explore the philosophies underlying health and healing practices will provide a broad foundation for the study of the sensory and cognitive healing approaches in the course.

Required Reading


Recommended Reading

To be advised by Lecturer.

Subject Hours

A minimum of thirty-six (36) hours for one semester comprising lectures, tutorials, seminars and self-managed learning.

Assessment

Personal reflective journal; class participation/group work (20%); one written assignment (2000 words) (Nutrition and Diet, 30%); four (4) group written cases (Diagnosis and Management, 25%, hurdle requirement); one 3-hour final written open-book examination (Diagnosis and Management, 25%, hurdle requirement).

HHH4111 RESEARCH METHODS IN HEALTH SCIENCE

Campus St Albans

Prerequisites

Required Reading


Recommended Reading


SPSS for Windows: www.spss.com


Class Contact

Three hours per week
Assessment One two-hour formal examination 40%; One one-hour practical examination on the use of SPSS 30% and one written assignment (1,500 words) 30%.

HHH4121 PLANNING THE HEALTH HONOURS RESEARCH PROJECT
Campus St Albans
Prerequisites Nil
Co-requisites
Learning Outcomes On the completion of this subject, students will be able to:
• demonstrate an understanding of national, state and regional health priorities;
• demonstrate an understanding of the social and cultural factors that impact upon health, particularly with respect to the student’s proposed research undertaking;
• construct a research proposal which details the student’s proposed research;
• identify and propose ways of managing any ethical issues pertaining to the student’s research;
• demonstrate competence the use of Endnote referencing / data management software.

Content This subject focuses on research planning, with particular emphasis upon situating research within national, state and regional health priorities. The subject assists students in detailing and constructing their research proposals and identifying ethical issues that pertain to their proposed research. The subject includes library workshops on locating and retrieving relevant data, computer lab sessions on the use of Endnote data management/referencing software.

Students will be provided instruction on academic writing, the appropriate use of information when writing and correct referencing protocols. This subject will include class sessions on plagiarism and students will be provided copies of the university’s plagiarism policy. This subject will also assist students in refocusing their ‘student portfolios’ towards ones which emphasise health research abilities.

Required Reading Department of Human Services 2002, Western Metropolitan Region Health and Social Wellbeing Profile (Second Edition), Department of Human Services, Melbourne.


Western Health:
Class Contact Three hours per week.
Assessment One assignment (target student portfolio – 800 words) 20% to be submitted in week 5 of the semester as a means of providing students with ‘early feedback’; One one-hour practical exam in the use of endnote software 30%; One research proposal that details the student’s proposed study (minimum 4,000 words) 50%.

HHH4131 HEALTH HONOURS THESIS
Campus St Albans
Prerequisites Research Methods in Health Science; Planning the health honours research project.
Co-requisites
Learning Outcomes On the completion of this subject, students will have:
• gained skills in research planning and implementation;
• enhanced their skills in academic writing, information retrieval and referencing;
• constructed and submitted an ethics application based on their proposed research;
• completed the initial phases of their research undertaking;
• made significant progress in drafting the ‘introductory’ and ‘literature review’ sections of their written thesis.

Content This subject focuses upon assisting students in the initial phases of their supervised research study. Particular emphasis is given to the formulation and submission of an ethics application and writing the first draft of the ‘introductory’ and ‘literature review’ sections of the written thesis.

Required Reading Reading will vary in accord with each student’s specific research topic, aims and method.


Class Contact Six hours per week.
Assessment An ethics submission that details and addresses the ethical aspects of the student’s research, for submission to the Faculty Ethics Committee (graded as ‘satisfactory’ or ‘unsatisfactory’).

The satisfactory completion of the initial stage of the student’s research project in accord with her/his research project plan and timelines. (graded as ‘satisfactory’ or ‘unsatisfactory’).

HHH4241 HEALTH HONOURS THESIS 2
Campus
Prerequisites Health Honours Thesis 1
Co-requisites
Learning Outcomes On the completion of this subject, students will have:
• enhanced their research skills;
• undertaken the data collection phase of their research;
• commenced the data analysis phase of their research;
• applied problem-solving strategies in resolving difficulties in the research undertaking.

Content This subject is focuses upon assisting students in their supervised research study. Particular emphasis is given to data collection and analysis. Group discussion and collective work-shopping of specific issues experienced by students in their research will also be a major focus in this subject.

Required Reading Reading will vary in accord with each student’s specific research topic, aims and method.


Class Contact Six hours per week.
Assessment The satisfactory completion of defined stages of the student’s research project in accord with the student’s research project plan and timelines. This subject is graded as ‘satisfactory’ or ‘unsatisfactory’ on the basis of the student progress report.

HHH4251 HEALTH HONOURS THESIS 3
Campus St Albans
Prerequisites Health Honours Thesis 2
Co-requisites
Learning Outcomes On the completion of this subject, students will have:
• enhanced their skills in research and academic writing;
• completed and submitted their written research thesis.

Content This subject focuses upon assisting students in the final phases of their supervised research study. Particular emphasis is given to exploring the implications of their research findings and the compilation of a written honours thesis. Group discussion and collective work-shopped of specific issues experienced by students in their research will also be a major focus in this subject.

Required Reading Reading will vary in accord with each student’s specific research topic, aims and method.


Class Contact Six hours per week

Assessment The completion and submission of the honours thesis (20,000 to 25,000 words) that will be examined in accord with the thesis assessment procedures of the School of Health Sciences and graded in accord with the honours grading system of Victoria University.

HHI4005 SCHOOLS OF THOUGHT IN CHINESE HERBAL MEDICINE

For continuing students only

Campus St Albans

Prerequisite(s) HHI3001 Chinese Herbal Medicine Practice; or equivalent.

Content The emphasis of this subject is to look at the practical ways in which classical schools of thought have influenced the practice of Internal Medicine. This subject will explore Liu Shih-Chen’s Cold Injury School, He Jian School, Yi Shui School, Pathogen attacking School, Dan Xi School, Warming and Reinforcing School, Warm Disease School, Blood Stasis School and other influential approaches. The perspectives of Wu Shiji’s External Medicine and Chen Shigong’s Wai Ke will also be introduced.


Recommended Reading To be advised by Lecturer.

Subject Hours Thirty (30) hours or equivalent for one semester comprising lectures and self-managed learning activities. This subject will be delivered in its entirety before the mid-semester break to allow students to undertake their final clinical internship in China.

Assessment One oral presentation (50%); one written assignment (1000 words) (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (assignment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

HHI4010 CHINESE MEDICINE CLINICAL INTERNSHIP 1 – HERB MAJOR

For continuing students only

Campus St Albans

Prerequisite(s) HHI3020 Chinese Medicine Clinical Practice – Herb Major 4; HHT3001 Internal Medicine; or equivalents.

Content During the first week of semester, students will attend two-hour seminars to orientate them to the final level of the clinical program; to review expectations of them in the clinic; to review student ethics and professional behaviour; to review standard operating procedures of the clinical dispensary and system in use for public consultations, in preparation for continuation of the clinical program. Students undertake their final year clinical placement as the Intern Practitioner in approved settings. Much of the placement will be undertaken in the on-campus student clinic. This subject must be completed before off shore clinical placements can be approved. Internship Practitioner: The student practitioner is expected to conduct themselves in the professional manner, working under the supervision of a qualified Chinese medicine practitioner. Skills required of the intern practitioner: take all case notes, define diagnosis, herbs and main formulas that the prescription could be based upon, define treatment principles and where appropriate apply acupuncture. The intern practitioner works independently and assumes full responsibility for the conduct of each consultation, and production of a final prescription. The supervising practitioner is accessed as required. Prescriptions must be approved by the supervising practitioner as suitable and safe to dispense for each client consulted, before being processed in the dispensary. Internship Mentor: Final year students are to work closely with junior students to assist them in the development of clinical skills. Dispensary supervision- final year students will spend part of their time as supervisor in the dispensary. This will give the Internship practitioner the opportunity to provide mentorship for junior students and assume responsibility for the running of the practice dispansary. While the supervising practitioner has overall authority, the Internship practitioner must liaise with the supervising practitioner for all financial decisions and must report discipline issues. During the mentorship process, the Internship practitioner has the authority to propose HPUP policies and procedures are followed. Internship observer status: Clinical hours may also be required. The nature of the ‘observation’ will need to be discussed in the first instance with the Subject Co-ordinator.

HHI4020 CHINESE MEDICINE CLINICAL INTERNSHIP 2 – HERB MAJOR

Campus St Albans

Prerequisite(s) HHI4010 Chinese Medicine Clinical Internship 1 – Herb Major; or equivalent.

Content During the first week of semester, students will attend a two-hour seminar to orientate them to the final level of the clinical program; to review expectations of them in the clinic; to review student ethics and professional behaviour; to review standard operating procedures of the clinical dispensary and system in use for public consultations, in preparation for continuation of the clinical program. Students undertake their final year clinical placement as the Intern Practitioner in approved settings. Much of the placement will be undertaken in the on-campus student clinic. This subject must be completed before off shore clinical placements can be approved. Internship Practitioner: The student practitioner is expected to conduct themselves in the professional manner, working under the supervision of a qualified Chinese medicine practitioner. Skills required of the intern practitioner: take all case notes, define diagnosis, herbs and main formulas that the prescription could be based upon, define treatment principles and where appropriate apply acupuncture. The intern practitioners work independently and assume full responsibility for the conduct of each consultation, and production of a final prescription. The supervising practitioner is accessed as required. Prescriptions must be approved by the supervising practitioner as suitable and safe to dispense for each client consulted, before being processed in the dispensary. Internship Mentor: Final year students are to work closely with junior students to assist them in the development of clinical skills. Dispensary supervision- final year students will spend part of their time as supervisor in the dispensary. This will give the Internship practitioner the opportunity to provide mentorship for junior students and assume responsibility for the running of the practice dispansary. While the supervising practitioner has overall authority, the Internship practitioner must liaise with the supervising practitioner for all financial decisions and must report discipline issues. During the mentorship process, the Internship practitioner has the authority to propose HPUP policies and procedures are followed. Internship observer status: Clinical hours may also be obtained if a student ‘observes’ clinical practice with a recognized Herbalist with a minimum of 10 years clinical practice (15-20 minimum recommended). The nature of the ‘observation’ will need to extend to internship status for approval to be granted.

HHL4004 SCHOOLS OF THOUGHT IN ACUPUNCTURE Campus St Albans Prerequisite(s) HHHK3002 Acupuncture and Therapeutic Applications; or equivalent. Content Detailed explorations of a broad range of schools of thought from classical and contemporary Chinese medical literature, other Oriental and Western applications. Emphasis will be given to understanding these approaches and their relevance in a contemporary Australian clinical setting. Areas such as Zi wu liu zhing, ling gui ba fa, yuan wu bi lei, the application of the ‘Ghost Points’ and Japanese approaches are addressed. Special emphasis is given to clinical concerns connected to the notion of two important Chinese medical ideas: dispersing xie Qi and supporting zheng Qi. Required Reading Maciocia, G. (1994). The practice of Chinese medicine: The treatment of diseases with acupuncture and Chinese herbs. Edinburgh: Churchill Livingstone. Pirog, J. E. (1996). The practical application of meridian style acupuncture. Berkeley, CA: Pacific View. Recommended Reading To be advised by Lecturer. Subject Hours Twenty (20) hours or equivalent for one semester comprising lectures, seminars and self-managed learning activities. This subject will be delivered in its entirety before the mid-semester break to allow students to undertake their final clinical internship in China. Assessment One class presentation (50%); one assignment (1000 words) (50%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (assignment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%. HHL4181 RESEARCH 1 Campus St Albans, City Flinders, Off Campus Prerequisites HBOS Bachelor of Science – Clinical Sciences; or equivalent. Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Evaluate different types of statistical designs;
2. Explain research methods relevant to research in osteopathy and related health fields;
3. Identify ethical requirements in the conduct of research;
4. Critically appraise literature in the field of health science;
5. Independently write a research proposal;
6. Present a research proposal in an oral format to peer review.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials and workshops. Assessment Submission of a written ethics application (hurdle requirement); one written assignment (40%); one 2-hour written examination (60%).

HHL4282 RESEARCH 2 Campus St Albans, City Flinders, Off Campus Prerequisites HHL4181 Research 1; or equivalent. Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Explain data analysis methods relevant to research in osteopathy and related health fields;
2. Describe detailed methods of qualitative and quantitative statistical analysis;
3. Use a statistical computer package for data analysis;
4. Complete a written ethics application for a research proposal.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and self-directed learning. Assessment Submission of a written ethics application (hurdle requirement); one written assignment (40%); one 2-hour written examination (60%).

HHL5183 RESEARCH 3 Campus St Albans, City Flinders, Off Campus Prerequisites HHL4282 Research 2; or equivalent. Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Independently progress the data collection and analysis phases of research;
2. Produce a working draft of a thesis.
Content Following receipt of ethics committee approval, students will complete data collection and analysis appropriate to their individual research projects and write a draft of the thesis, which in its final form will be a 12,000-20,000 word thesis of an standard consistent with publication in a peer reviewed journal.

Required Reading There are no set texts for this unit. Reading will be influenced by the nature of the research project undertaken by the student.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising independent research, meetings with supervisors, and tutorials and workshops as required.

Assessment Two satisfactory progress reports from supervisor(s) (week 5, end-of-semester) (hurdle requirement).

HHL5284 RESEARCH 4

Campus St Albans, City Flinders, Off Campus.

Prerequisites HHL5183 Research 3, or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Independently produce a scholarly piece of original writing (thesis of 12,000-20,000 words) relevant to the discipline of health science;
2. Engage in further research activities and research training.

Content Students having undertaken an individual research project in earlier HHL4181, HHL4282 & HHL5183 Research units will use this unit to complete the (12000-20000 word) minor thesis component of the degree. The thesis will provide evidence of independent academically rigorous research, which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and analyse, interpret and present data. The thesis should demonstrate a high standard of written communication skills consistent with publication in a peer reviewed journal. Presentation of the thesis should be in a conventional scientific format. An oral PowerPoint presentation is also required.

Required Reading There are no set texts for this unit. Reading will be influenced by the nature of the research project undertaken by the student.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising independent research, meetings with supervisors, and tutorials and workshops as required.

Assessment Satisfactory progress report from supervisor(s) (hurdle requirement); one oral PowerPoint presentation of project (20%); one minor thesis (12,000-20,000 words) (80%) (hurdle requirement). Examination of the minor thesis will be in accordance with the policies outlined by the Faculty of Health, Engineering and Science and the School of Health Sciences.

HHM6800 RESEARCH THESIS (FULL-TIME)

Campus Footscray Park

Prerequisite(s) Eligibility for entry to a Masters by Research or Doctor of Philosophy program.

Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the investigation described in detail; results and conclusions from the study elaborated; and an extended discussion presented. Students may be required to undertake some lecture courses, as specified at the time of commencement.

Required Reading To be advised by supervisor.

Subject Hours Independent research in addition to regular meetings with the student supervisors.

Assessment The thesis will normally be assessed by at least two expert examiners from an appropriate area of expertise.

HHM6801 RESEARCH THESIS (PART-TIME)

Campus Footscray Park

Prerequisite(s) Nil.

Content An introduction to the role of the counsellor and relationship between the client and practitioner. The following theories will be covered: Psychoanalytic, Adlerian, Existential, Person Centred, Gestalt, Reality, Behavioral, Cognitive, Family systems, Ego State Therapies, as well as meditation, relaxation therapy. Ethical and legal issues of counselling.


The spectrum of consciousness. The Journal of Transpersonal Psychology 7(2). Additional reading as directed by the lecturer.

Subject Hours The equivalence of 39 hours per semester delivered in burst模式 two weeks or over one semester of 13 weeks.

Assessment Seminar presentation (15%); class participation (25%); written theory assignment (1500 words) (40%); reflective journal (20%). A pass must be gained for each component of the assessment.

HHO1171 OSTEOPATHIC SCIENCE 1 Campus St Albans
Prerequisite(s) Nil
Co-requisite(s) HHA1171 Anatomy 1; HHP1171 Physiology 1; HHH1171 Clinical Practicum 1; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss osteopathic principles at a basic level;
2. Identify and palpate major anatomical structures and landmarks;
3. Demonstrate soft tissue and articulatory techniques for most areas of the musculoskeletal system of the shoulder girdle, upper limb, head, neck and upper thorax.

Content This unit comprises three modules: Module 1: Technique; Module 2: Palpation; and Module 3: History and Principles. Module 1: Consideration of somatic dysfunction and the functioning of the individual as a whole. An introduction to osteopathic diagnosis. Basic soft tissue techniques applicable to the tissues of the musculoskeletal system. The use of leverages to induce motion within these tissues, including an appreciation of barrier principles. Contraindications to osteopathic care both absolute and relative. Module 2: Development of palpatory skills and awareness of normal and abnormal tissue characteristics. Research and presentation skills relating to the published literature on palpation. Emphasis is placed on palpatory skills, osteopathic soft tissue and articulatory techniques, surface anatomy and tissue awareness. The palpation component will augment and reinforce anatomy presented in the unit Anatomy 1. Module 3: Development of the conceptual framework of osteopathy and an understanding of osteopathic history and philosophy.


Class Contact Seven (7) hours per week or equivalent for one semester comprising lectures and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one small-group activity with peer-assessed written assignment (Technique) (pass/fail) (hurdle requirement); one 40-minute combined practical and oral examination (OSCE format) (20 minutes Technique; 20 minutes Palpation) (pass/fail) (hurdle requirement).

HHO1272 OSTEOPATHIC SCIENCE 2 Campus St Albans, City Flinders, Off Campus.
Prerequisites HHO1171 Osteopathic Science 1; HHP1171 Physiology 1; or equivalents.
Co-requisite(s) HHA1272 Anatomy 2, HHU1272 Clinical Practicum 2, or equivalents;

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss osteopathic principles at a level higher than basic;
2. Name, identify and palpate the major anatomical structures and landmarks;
3. Describe the major anatomical structures and landmarks, including in plain language;
4. Demonstrate soft tissue and articulatory techniques for prescribed areas of the musculoskeletal system: thorax, lumbar, pelvic and lower limb;
5. Adapt osteopathic soft tissue and articulatory techniques to accommodate patients’ needs and preferences.

Content This unit comprises three modules: Module 1: Technique; Module 2: Palpation; and Module 3: History and Principles. Module 1: Students will continue to develop osteopathic diagnostic skills, palpatory skills including awareness of normal and abnormal tissue characteristics, and articulatory technique skills applied to the following musculoskeletal regions: thorax, lumbar, pelvis and lower limb. Module 2: The Technique and Palpation components will augment and reinforce anatomy presented in the unit Anatomy 2. Module 3: Continued development of the conceptual framework of osteopathy and an understanding of osteopathic history and philosophy.


Class Contact Seven (7) hours per week or equivalent for one semester comprising lectures and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one combined practical and oral mock examination (OSCE format) (Technique) (pass/fail formative assessment); three quizzes (History and Principles) (pass/fail) (hurdle requirement); one peer-assessed written assignment (History and Principles) (pass/fail) (hurdle requirement); one 40-minute combined practical and oral examination (OSCE format) (20 minutes Technique; 20 minutes Palpation) (pass/fail) (hurdle requirement).

HHO2173 OSTEOPATHIC SCIENCE 3 Campus St Albans, City Flinders, Off Campus.
Prerequisites Satisfactory completion of Year 1 of the HBOS degree; or equivalent.
Co-requisites

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Explain the biomechanical principles underlying the use of HVLA thrust techniques to the spine;
2. Demonstrate with commentary and perform HVLA thrust techniques to the spine safely whilst taking into consideration both patient and operator comfort;
3. Explain the principles of regional peripheral examination;
4. Demonstrate with commentary and perform examinations of the peripheral regions;
5. Discuss presentations of common osteopathic conditions and their diagnosis;
6. Explain the major contraindications to osteopathic treatment in relation to the various techniques taught;
7. Discuss the requirements and considerations for patient and operator safety and comfort;
8. Contrast principles and practices of osteopathic medicine from allopathic and other forms of complementary medicine.

**Content**

This unit comprises three modules: Module 1: High Velocity Low Amplitude Thrust Technique; Module 2: Peripheral Joint Technique; and Module 3: Osteopathic Science Theory. The content includes: further development of osteopathic manual soft tissue skills and the uses of leverage in treatment regimes. Continued refinement of treatment approaches to effect reflex and structural changes in muscle. Introduction to the use of high velocity thrust techniques applicable to the spine and periphery. Principles of examination of the peripheral regions. Stress is placed upon observation prior to palpation and the need to recognise the anatomical relationships on one region of the body to others. Osteopathic principles and application of forces to all soft tissues and joints of the body to normalise mechanics. Contraindications to the use of osteopathic techniques. Application and interpretation of tests and protocols relating to patient safety. Further exploration of the principles and practice of osteopathic medicine as distinct from allopathic and other complementary therapies. The evidence base underpinning osteopathic principles and somatic dysfunction. Common conditions seen in osteopathic diagnosis and the diagnosis of these conditions.

**Recommended Reading**


**Recommended Reading**

quarter. Motor recruitment assessment and treatment in the lower and upper quarter. Assessment and treatment of the cervical, thoracic and lumbar spine, rib cage, sacral and innominates, dysfunction, and shoulder. Modes of clinical presentation, including peripheral joint injuries and common orthopaedic complaints.


Class Contact Five (5) hours per week or equivalent for one semester comprising lectures and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one 2-hour peer-group mock clinical MET assessment task (MET) (pass/fail formative assessment) (hurdle requirement); one written assignment (1500 words) (Osteopathic Science Theory) (pass/fail) (hurdle requirement).

HHO3276 OSTEOPATHIC SCIENCE 6

Campus: St Albans, City Flinders, Off Campus.

Prerequisites HHO3175 Osteopathic Science 5; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Competently assess all regions of the musculoskeletal system for somatic dysfunction;
2. Explain the major contraindications to osteopathic treatment in relation to the various techniques taught;
3. Competently apply MET to any region of the musculoskeletal system;
4. Competently demonstrate with commentary and perform HVLA thrust techniques to the spine safely whilst taking into consideration both patient and operator comfort;
5. Explain HVLA of transitional regions;
6. Justify various models of osteopathic diagnosis, treatment and prognosis.

Content This unit comprises three modules: Module 1: Advanced High Velocity Low Amplitude Technique (HVLA); Module 2: Muscle Energy Technique (MET); and Module 3: Osteopathic Science Theory – common conditions. Module 1: Advanced techniques, reviewing from Osteopathic Science 3 & 4, study of the principles of HVLA thrust techniques for transitional areas and application of these techniques. Study of contraindications and safety issues in HVLA thrust techniques. Module 2: Study of the components and development of diagnosis, and estimation of prognosis in osteopathic practice. Module 3: Clinical presentations in osteopathic practice, including peripheral joint injuries and common orthopaedic complaints.


HHO4187 OSTEOPATHIC SCIENCE 7

Campus: St Albans, City Flinders, Off Campus.

Prerequisites HHO3175 Osteopathic Science 5; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Justify the importance of preventative care during rehabilitation.
2. Discuss specific rehabilitation program principles for common injuries encountered in osteopathic practice.
3. Assess and rehabilitate of common injuries involving the ankle, calf, foot and knee.
4. Discuss aspects of patient management, including those that may impact on the management of the elderly and infirm.

Content Introduction to indirect techniques. Strain/counterstrain techniques and introduction to functional assessment and technique. Introduction to concepts and principles of rehabilitation for specific injuries encountered in osteopathic practice. Assessment, treatment and rehabilitation of common injuries affecting the spine, pelvis and thorax. Case conferencing.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Two (2) written assignments (2000 words each) (25% each, total 50%); one 20-minute practical examination (50%) (hurdle requirement).

HHO4288 OSTEOPATHIC SCIENCE 8

Campus: St Albans, City Flinders, Off Campus.

Prerequisites HHO4187 Osteopathic Science 7; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Demonstrate a range of technical skills, including fascial and balanced ligamentous tension techniques;
2. Discuss specific rehabilitation program principles for common injuries encountered in osteopathic practice.
3. Explain rehabilitation procedures for common conditions and surgical procedures affecting the spine, pelvis and thorax.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Two (2) written assignments (2000 words each) (each 25%, total 50%); one 20-minute practical skills test (50%) (hurdle requirement).

HHO5189 OSTEOPATHIC SCIENCE 9
Campus St Albans, City Flinders, Off Campus
Prerequisites HHO4288 Osteopathic Science 8; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Demonstrate an expanded range of technical skills, including the ability to manage common visceral conditions amenable to osteopathic treatment;
2. Demonstrate a broad range of technical skills, including the ability to manage common sports injuries affecting the limbs;
3. Discuss common modes of osteopathic practice, and the basic business skills required to run a practice.

Content Visceral osteopathy and osteopathic management of conditions with visceral involvement. Introduction to principles and concepts of rehabilitation for specific injuries encountered in osteopathic practice. Assessment, treatment and rehabilitation of common injuries involving the ankle, calf, foot and knee. Acute and chronic injuries and principles of taping. Practice management - business skills and information required for day-to-day osteopathic practice.


Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Two (2) written assignments (2000 words each) (25% each, 50% total); one 20-minute practical skills assignment (50%) (hurdle requirement).

HHO5280 OSTEOPATHIC SCIENCE 10
Campus St Albans, City flinders, Off Campus
Prerequisites HHO5189 Osteopathic Science 9; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Demonstrate an expanded range of technical skills, including the ability to assess and treat cranio-sacral conditions amenable to osteopathic treatment;
2. Demonstrate a broad range of technical skills, including the ability to manage common sports injuries affecting the spine and pelvis;
3. Discuss sufficient business skills required to run a practice, including appropriate aspects of tax law and third party payer requirements.

Content Introduction to the cranio-sacral osteopathy. Series of masterclasses by guest lecturers covering various aspects of technique and practice issues. Practice Management: Business skills and information required for day-to-day osteopathic practice.


Recommended Reading Department of Veterans Affairs. (2004). HIP05 Information for chiropractors and osteopaths available from DVA website, www.dva.gov.au


Class Contact Eight-hour (84) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and practical classes. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment One written assignment (2000 words) (50%); one 20-minute practical skills examination (50%) (hurdle requirement).

HHP1171 PHYSIOLOGY 1
Campus St Albans, City Flinders, Off Campus
Prerequisite(s) Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss the key principles and concepts of human physiology in relation to cardiovascular and renal physiology;
2. Explain the major concepts involved in cardiac, circulatory and renal physiology;
3. Link theoretical physiology knowledge and laboratory skills;
4. Apply scientific questioning to basic theoretical knowledge in physiology;
5. Critically assess research papers and physiology research papers in particular;
6. Produce laboratory reports and written critiques in a conventional scientific format.

Content An introduction to the basic principles and concepts of human physiology. Concepts include homeostasis, cellular physiology, and the body’s natural defences. Introduction to the nervous, membrane and action potentials, transmission of nervous impulses, and muscle physiology. Theoretical physiological knowledge is integrated with laboratory skills through the use of research questions and laboratory reports. Research skills development, including critical thinking and scientific writing, is incorporated throughout the unit.


Subject Hours Three (3) hours per week or equivalent for one semester comprising lectures and laboratory workshops. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one written assignment (1200 words) (15%); five (5) laboratory practicals (3% each, total 15%); two 1-hour multiple choice question (MCQ) written examinations (10% each, total 20%); one 3-hour final written examination (50%).

HHP2172 PHYSIOLOGY 2
Campus St Albans, City Flinders, Off Campus
Prerequisites HHP1171 Physiology 1; or equivalent.
Co-requisites HHY2172 Pathology 2; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss the key principles and concepts of human physiology in relation to cardiovascular and renal physiology;
2. Explain the major concepts involved in cardiac, circulatory and renal physiology;
3. Integrate theoretical cardiovascular and renal physiology knowledge with laboratory skills;
4. Apply scientific questioning to basic theoretical knowledge of cardiovascular and renal physiology;
5. Critically assess research papers and cardiovascular and renal physiology papers in particular;
6. Develop laboratory reports and written critiques in a conventional scientific format.

**Content**
This unit extends the principles and concepts of basic human physiology. Aspects of cellular and systems physiology are explained in the contexts of cardiac, circulatory and renal physiology. Development of critical thinking and research writing skills is continued. Unit content is specifically related to clinically relevant presentations in osteopathic practice.

**Required Reading**

**Recommended Reading**

**Class Contact**
Three (3) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory classes. Practical sessions have a hurdle requirement of at least 90% attendance.

**Assessment**
Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); five (5) laboratory reports (total 15%); one written assignment (1500 words) (15%); two (2) multiple choice question (MCQ) tests (10% each, total 20%); one 3-hour final written examination (50%).

**HHP2273 PHYSIOLOGY 3**
Campus St Albans, City Flinders, Off Campus.

**Prerequisites**
HHP2172 Physiology 2; or equivalent.

**Co-requisite(s)**
HHY2273 Pathology 3; or equivalent.

**Learning Outcomes**
1. Discuss the key principles and concepts of human physiology in relation to respiratory and gastrointestinal physiology;
2. Explain the major concepts involved in respiratory and gastrointestinal physiology;
3. Integrate theoretical knowledge on respiratory and gastrointestinal physiology with clinical cases;
4. Apply scientific questioning to basic theoretical knowledge of respiratory and gastrointestinal physiology;
5. Critically assess research and clinical report papers, and respiratory and gastrointestinal physiology papers in;
6. Produce clinical case reports and written critiques on topics in respiratory and gastrointestinal physiology in a conventional scientific format.

**Content**
This unit extends the principles and concepts of basic human physiology. Aspects of cellular and systems physiology are explained in the contexts of respiratory and gastrointestinal physiology. Critical thinking in human physiology is extended through the use of clinical case studies and the clinical case report. Material is specifically related to clinically relevant presentations in osteopathic practice.

**Required Reading**

**Recommended Reading**

**Class Contact**
Three (3) hours per week or equivalent for one semester comprising lectures and tutorials. Practical sessions have a hurdle requirement of at least 90% attendance.

**Assessment**
Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one oral presentation of a case study (15%); written assignment (2000 words) (20%); two 1-hour multiple choice question (MCQ) written tests (10% each, total 20%); one 3-hour written examination (45%).

**HHP3275 PHYSIOLOGY 5**
Campus St Albans, City Flinders, Off Campus.

**Prerequisites**
HHP3174 Physiology 4; or equivalent.

**Learning Outcomes**
On successful completion of this unit, it is expected that students will be able to:
1. Define the theoretical and practical concepts in exercise physiology and exercise prescription;
2. Discuss the principles of exercise physiology and exercise prescription;
3. Discuss the principles of prescribing exercise to special populations;
4. Explain exercise prescription for specific patient groups;
5. Discuss issues associated with acute sporting injuries;
6. Develop and write exercise programs;
7. Show familiarity with some sports medicine techniques.

**Content**
The introduction of the concepts and principles of exercise physiological and the methodology of exercise prescription in normal and special populations. Topics include cardiovascular and muscular responses and adaptations to exercise; exercise prescription principles, exercise prescription for normal and patient populations, principles of stretching and strengthening exercises. Clinical case studies relevant to osteopathic practice are used to extend critical thinking throughout this unit.

**Required Reading**
2. The political, psychosocial and cultural context of disaster.

- Risk assessment, mitigation and management models. – Define and describe risk management approaches to Emergency Management Planning and Prevention.
- Discuss the application of risk management in the context of Emergency Planning and Preparedness.
- Discuss risk management in the context of Emergency Management Planning and Prevention.
- Discuss disaster mitigation strategies and their application to Emergency Planning and Preparedness.

2. Models of planning and prevention in the national and international context.
- Define and describe national and international models of Emergency Management Planning and Prevention.
- Discuss the application of Emergency Management Planning and Prevention models in the context of the local environment.
- Discuss the critical considerations in counter disaster planning including disaster plans, crisis pressure and information management.

3. Federal, State/Territory and Local Government disaster policy and plans.
- Describe the global approach to Emergency Management Planning and Prevention.
- Discuss the application of policy and planning within the context of the student’s local environment.
- Evaluate the management of selected major incidents in relation to disaster plan activation and implementation.
- Explore the criteria for review of Emergency Management Plans, with reference to legislation that establishes the legal basis for planning.

4. Roles and responsibilities of Government and Non-government agencies in disaster planning and prevention, in particular coordination, capability, capacity and inter-operability.

Class Contact Two (2) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory sessions. Practical sessions have a hurdle requirement of at least 90% attendance.

Assessment Participation in practical sessions with at least 90% attendance unless well-documented acceptable reasons are provided (hurdle requirement); one written assignment (2000 words) (20%); one 15-minute combined oral and practical examination (30%); one 2-hour final written examination (50%).
– Describe and discuss the roles and responsibilities of Federal and State/Territory Government agencies in the disaster planning and prevention process, including Defence, health, ambulance, fire, police, State Emergency Service and essential service organisations.
– Describe and discuss the roles and responsibilities in the disaster planning and prevention process of non-government agencies.

Content This subject will contain:
1. Risk assessment, mitigation and management models.
2. Models of planning and prevention in the national and international context.
3. Federal, State/Territory and Local Government disaster policy and plans.
4. Roles and responsibilities of Government and Non-government agencies in disaster planning and prevention, in particular coordination, capability, capacity and inter-operability.

Required Reading

Class Contact 3 hours of on-line lecture and 1 hour of on-line tutorial. Further contact with students will be via on-line chat rooms/discussions and via e-mail and telephone.

Assessment Assessment will include two (2) three thousand (3000) word assignments with each worth 50% of the total mark (P3, I3, O2, W3, A3, C2, D2). To successfully complete this subject an aggregate mark of 50% must be achieved. Assessment will reflect the following Core Graduate Attributes. Students will:
– Identify and solve complex problems related to emergency management (P3).
– Locate, evaluate, manage and use information gained from a variety of sources and relate this information to emergency and disaster management (I3).
– Communicate with peers via on-line medium in formal and informal settings (O2).
– Synthesise complex material in the area of emergency and disaster management and communicate ideas at a professional level (W3).
– Manage time without guidance (A3).
– Undertake on-line group tasks and reflect upon issues in emergency and disaster management (C2).
– Apply and evaluate strategies relating to issues of social and cultural diversity in the emergency management context (D2).

HHP5103 DISASTER PREPAREDNESS

Campus Internet Australia
Prerequisites Appropriate Undergraduate qualification or equivalent
Learning Outcomes Upon completion of this subject the student will:
1. Counter Disaster Training and Education.
   – Describe Education and Training strategies to ensure effective management of all elements of disaster coordination.
   – Discuss the application of Education and Training principles in disaster preparedness.
2. Community and other stakeholder engagement.
   – Discuss the role of the community and other stakeholders in disaster preparedness.
   – Discuss strategies for engagement of community and stakeholder’s in disaster preparedness.
3. Assessment of preparedness.
   – Discuss the roles and responsibilities of federal, state/ territory, local government and individual agencies in disaster preparedness.
   – Discuss principles of assessment of disaster preparedness and the application of these principles in their local environment.
   – Discuss the principles of coordination and implementation of disaster exercises to test multi-agency disaster preparedness.
4. Interagency liaison.

SCHOOL OF HEALTH SCIENCES

HHP5104 DISASTER RESPONSE

Campus Internet Australia
Prerequisites Appropriate Undergraduate qualification or equivalent
Learning Outcomes Upon completion of this subject the student will:
– Identify important characteristics of the disaster response
– Discuss common problems associated with disaster response
– Describe the attributes and requirements essential for effective response
– Discuss response operations
– Discuss human factors involved in crisis situations including decision making and problem solving
– Discuss resources relevant to an all hazards approach to disaster response
– Discuss strategies for communicating with the media and the community
– Discuss the importance of interagency communication and liaison
– Demonstrate effective communication strategies
– Describe various command systems and discuss the relevance of command systems to disaster response
– Describe the roles and responsibilities of selected emergency services agencies to the disaster response
– Outline the major considerations in disaster command and control
– Identify essential resources applicable to the disaster response
– Discuss the management of resources in a disaster situation
– Identify characteristics of effective leadership in a crisis situation
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Identify common problems encountered during the disaster response and discuss strategies to mitigate such problems
- Describe risk management principles and strategies associated with the disaster response
- Describe the roles and responsibilities of federal, state/territory and local governments in responding to a disaster
- Describe the principles of safety, communications, and assessment response

Content
This subject will contain:
- Important characteristics of response
- Incident command systems
- Interagency communication
- Communication with the public and media
- Resource management
- Leadership in the disaster environment
- Common problems in disaster response
- Requirements for effective response
- Human factors—decision making and problem solving
- Principles and aspects of response

Required Reading


Recommended Reading

Class Contact
Three (3) hours of on-line lecture and 1 hour of on-line tutorial. Further contact with students will be via on-line chat rooms/discussions and via e-mail and telephone.

Assessment
Assessment will include two (2) three thousand (3000) word assignments with each worth 50% of the total mark (P3, I3, O2, W3, A3, C2, D2). To successfully complete this subject an aggregate mark of 50% must be achieved.

Assessment will reflect the following Core Graduate Attributes. Students will:
- Identify and solve complex problems related to emergency management (P3)
- Locate, evaluate, manage and use information gained from a variety of sources and relate this information to emergency and disaster management (I3)
- Communicate with peers via on-line medium in formal and informal settings (O2)
- Synthesise complex material in the area of emergency and disaster management and communicate ideas at a professional level (W3)
- Manage time without guidance (A3)
- Undertake on-line group tasks and reflect upon issues in emergency and disaster management (C2)
- Apply and evaluate strategies relating to issues of social and cultural diversity in the emergency management context (D2)

HHP5205 SPECIALIST RESPONSE IN DISASTERS

Campus
Internet Australia

Prerequisites
Appropriate Undergraduate qualification or equivalent

Co-requisites

Learning Outcomes
Upon successful completion of this subject the student will be able to:
- Identify and describe salient points from previous disasters and relate these points to the recovery phase
- Describe the key considerations when transferring from the response to the recovery phase
- Describe principles of recovery action
- Discuss common issues and problems encountered in the recovery phase
- Describe elements required for an effective recovery
- Identify and discuss the human factor to be considered in the recovery phase
- Identify and describe resources essential for an effective recovery
- Describe the requirements for the analysis of the recovery phase and describe key elements for projection for the disaster actions and the phases of emergency management

Content
This subject will contain:
- Significant issues from disaster analysis
- The transfer from response to recovery
- The basis for recovery action
- Common issues and problems in the recovery process
- Elements for an effective recovery
- Human factors in recovery

HHP5206 DISASTER RECOVERY

Campus
Internet Australia

Prerequisites
Appropriate Undergraduate qualification or equivalent

Co-requisites

Learning Outcomes
Upon successful completion of this subject the student will be able to:
- Identify and describe salient points from previous disasters and relate these points to the recovery phase
- Describe the key considerations when transferring from the response to the recovery phase
- Describe principles of recovery action
- Discuss common issues and problems encountered in the recovery phase
- Describe elements required for an effective recovery
- Identify and discuss the human factor to be considered in the recovery phase
- Identify and describe resources essential for an effective recovery
- Describe the requirements for the analysis of the recovery phase and describe key elements for projection for the disaster actions and the phases of emergency management

Content
This subject will contain:
- Significant issues from disaster analysis
- The transfer from response to recovery
- The basis for recovery action
- Common issues and problems in the recovery process
- Elements for an effective recovery
- Human factors in recovery

212
• Resources relevant to the recovery process.
• Analysis and projection of the recovery process.
• Describe psychosocial considerations in the recovery phase, including counselling and personal and community support.

Required Reading
Publications web page at www.ema.gov.au

Recommended Reading

Class Contact Three (3) hours of on-line lecture and 1 hour of on-line tutorial. Further contact with students will be via on-line chat rooms/discussions and via e-mail and telephone.

Assessment
Assessment will include two (2) three thousand (3000) word assignments with each worth 50% of the total mark (P3, I3, O2, W3, A3, C3, D3). To successfully complete this subject an aggregate mark of 50% must be achieved.

Assessment will reflect the following Core Graduate Attributes.

Students will:
• Identify and solve complex problems related to emergency management (P3).
• Locate, evaluate, manage and use information gained from a variety of sources and relate this information to emergency and disaster management (I3).
• Communicate with peers via on-line medium in formal and informal settings (O2).
• Synthesise complex material in the area of emergency and disaster management and communicate ideas at a professional level (W3).
• Manage time without guidance (A3).
• Undertake on-line group tasks and reflect upon issues in emergency and disaster management (C2).
• Apply and evaluate strategies relating to issues of social and cultural diversity in the emergency management context (D2).

HHP5207 LOGISTICS & SECURITY

Campus Internet Australia
Prerequisites Appropriate Undergraduate qualification or equivalent
Co-requisites
Learning Outcomes Upon successful completion of this subject the student will:
• Describe the general principles of logistics.
• Discuss the importance and place of logistics in disaster management.
• Describe the major considerations of logistics in the disaster cycle, planning, preparedness, response and recovery.
• Describe the management, administration and financial considerations of logistics in the context of a diaster.
• Describe the major considerations in National security.
• Identify threats to National security.
• Discuss the disaster cycle of planning, preparedness, response and recovery in the context of a terrorist attack.
• Describe the decision making process when the Nation or the scene is at risk.
• Discuss the essential components of disaster management in the event of a breech in National or scene security.
• Discuss the roles and responsibilities of the major emergency services organisations in the event of a terrorist attack including, Federal Police, State Police, Defence and other security agencies.
• Discuss the principles of command and control in the context of a terrorist attack or major crime.
• Discuss the principles of command and control in the context of warfare.

Content This subject will contain:
• Aspects of logistics.
• The importance and place of logistics in disaster management.
• Logistics in disaster planning, preparedness, response and recovery.
• Logistics management, administration and finance in the context of a disaster.
• Threats to National security.
• The preservation of National security.
• Emergency service organisations and National security.
• Command and control when the Nation’s security is at risk.
• Terrorism and its impact on society.
• Identification and management of a crime scene.
• Warfare and disaster planning, preparedness, response and recovery.
• Criminal and legal considerations in war.

Recommended Reading
Recommended Reading

HHP5208 DISASTER RESEARCH

Campus Internet Australia
Prerequisites Appropriate Undergraduate qualification or equivalent
Co-requisites
Learning Outcomes Upon successful completion of this subject the student will:
• Discuss the value of research to Emergency Management
• Demonstrate an ability to prepare a literature review
• Demonstrate an ability to write a clear and concise problem statement
• Demonstrate the ability to prepare a literature review
• Demonstrate the ability to write a clear and concise problem statement and the purpose of a study
• Define the components of a Hypothesis and development a research hypothesis
• Discuss a variety of approaches to Research
• Discuss the advantages and disadvantages of different methods of data collection
• Discuss methods of data analysis
• Develop a research proposal
• Discuss the role of Emergency Management personnel in relation to research
• Discuss ethical considerations in an Emergency Management research context

Content This subject will contain:
• The Introduction to research in Emergency Management
• Critical analysis of current research in Emergency Management
• Components of the research process
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

• Preparing a literature review
• Problem identification in Emergency Management
• Hypothesis development
• Research design
• Data collection
• Data analysis
• Research proposal preparation
• The role of the Emergency Manager in relation to research

Required Reading

Recommended Reading

Class Contact
Three (3) hours of on-line lecture and 1 hour of on-line tutorial. Further contact with students will be via on-line chat rooms/discussion and via e-mail and telephone.

Assessment
Assessment will include two (2) three thousand (3000) word assignments in the form of a literature review and research proposal with each worth 50% of the total mark (P3, I3, O2, W3, A3, C2). To successfully complete this subject an aggregate mark of 50% must be achieved. Assessment will reflect the following Core Graduate Attributes. Students will:
• Identify and solve complex problems related to emergency management (P3).
• Locate, evaluate, manage and use information gained from a variety of sources and relate this information to emergency and disaster management (I3).
• Communicate with peers via on-line medium in formal and informal settings (O2).
• Synthesise complex material in the area of emergency and disaster management and communicate ideas at a professional level (W3).
• Manage time without guidance (A3).
• Undertake on-line group tasks and reflect upon issues in emergency and disaster management (C2).
• Apply and evaluate strategies relating to issues of social and cultural diversity in the emergency management context (D2).

HR3324 ACUPUNCTURE AND MOXIBUSTION: THERAPEUTIC APPLICATIONS
Campus GCIT
Prerequisites
As arranged and negotiated by GCIT and VUT.
Co-requisites
Learning Outcomes
By the end of this unit the student it is expected that the student will be better able to propose and defend a tentative diagnosis, critically assess the means by which the diagnosis is arrived at, propose a management strategy including practitioner advice/counsel and client self help tasks, suggest a point combination and subsequent combinations given the practitioner’s understanding of the client’s pattern, explain in plain English the client’s condition and the proposed treatment strategy, select an appropriate patent herbal remedy according a client's presenting pattern.
Content
This subject focuses on a fundamental Traditional Chinese medical idea: the relationship between theory and practice. The unit emphasises the importance of consolidating the task of making a tentative diagnosis, proposing appropriate treatment strategies and management while recognising the role of the practitioner as an agent of change. By simulating clinical experiences the student is offered the opportunity to refine their clinical skills in relationship to their internship training. Specific emphasis is given to critical analysis of case studies, point selection, discrimination and acupuncture point combinations, pulse taking and its clinical significance, consolidating physical therapies such as auricular, scalp acupuncture etc.

Required Reading

Recommended Reading
HHR3254 ACUPUNCTURE AND MOXIBUSTION: CLINICAL MEDICINE 2

Campus VU/Gold Coast Institute of TAFE (GCIT)

Prerequisites As arranged and negotiated by GCIT and VUT.

Co-requisites


Content A traditional medical perspective of gynaecology and fertility conditions, obstetrics, pediatrics, substance abuse, skin conditions, HIV/AIDS and cosmetic acupuncture.


Content A traditional medical perspective of gynaecology and fertility conditions, obstetrics, pediatrics, substance abuse, skin conditions, HIV/AIDS and cosmetic acupuncture.


Content A traditional medical perspective of gynaecology and fertility conditions, obstetrics, pediatrics, substance abuse, skin conditions, HIV/AIDS and cosmetic acupuncture.


FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Assessment One clinical interview analysis (60%); one video report (40%).

HHS3272 PSYCHOLOGY & SOCIAL SCIENCES 2

Campus St Albans, City Flinders, Off Campus.

Prerequisite(s) HHS3171 Psychology & Social Sciences 1; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss psychological and sociological issues relevant to healthcare practice;
2. Explain the needs of patients from different communities; 3. Use effective communication and interviewing skills relevant to osteopathic practice;
4. Predict the effects of stress on patients;
5. Propose strategies to minimize the effects of stress on patients;
6. Discuss the issues associated with suicide and euthanasia;
7. Explain the effects of and interventions for health-compromising behaviours;
8. Justify and promote health-enhancing behaviours for the individual and the group.

Content Psychological and sociological aspects of healthcare practice. The needs of patients in the community. Relevance of gender, age, ethnicity and socio-economic status in healthcare practice. Communications skills required in healthcare practice. Health enhancing and health-compromising behaviors. Challenging situations, such as stress, suicide and euthanasia. In healthcare practice.


Class Contact Two (2) hours per week or equivalent for one semester comprising lectures and tutorials.

Assessment Patient interviews and presentation (30%); one exercise program (30%); one 2-hour end-of-semester written examination (40%).

HHS4183 PSYCHOLOGY AND SOCIAL SCIENCES 3

Campus St Albans, City flinders, Off Campus

Prerequisite(s) HBOS Bachelor of Science – Clinical Sciences; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Apply the basic skills that are necessary for effective interpersonal communication in a therapeutic relationship;
2. Predict the effects that psychological variables may have on pain symptomatology and pain management;
3. Recognize behaviours and symptoms that are consistent with psychopathology;
4. Describe strategies useful to the osteopath in the management of key psychopathologies.

Content Interpersonal communication skills: attending and listening, feedback, empathy, probing, identifying and clarifying problems, ethics. Psychology of pain and pain management. Pain theories and measurement, psychosocial factors, placebos and expectations, descriptions and categories of pain, managing acute and chronic pain. Psychopathology, presentation, recognition, diagnosis, and an overview of the management of psychopathology.


Class Contact Twenty-four (24) hours or equivalent normally spread over one semester comprising lectures, tutorials and workshops.

Assessment Workshop presentation (20%; hurdle requirement); one written assignment (1500 words) (30%; hurdle requirement); one 3-hour written examination (50%) (hurdle requirement).

HHT1000 MAJOR CLASSICS – NEI JING

Campus St Albans

Prerequisite(s) Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Discuss how the Nei Jing has informed CM practice;
2. Evaluate the meaning, relevance and application of Nei Jing in historical perspectives;
3. Evaluate the significance of ancient medical wisdom in contemporary Western settings;
4. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Specific attention will be directed to such ideas as yin-yang; wu xing, the heaven, earth and humanity principle; the nature and meaning of Shen; different ways of specifying and locating Qi in the body and external world; the notion of body-mind; the cultivation of life (Qi) and the idea of the good practitioner. The exploration of Nei Jing ideas is linked to major philosophical concepts that inform the theory and practice of Chinese medicine.


Subject Hours Three (3) hours per week or equivalent for one semester comprising lectures. Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated class contact hours.

Assessment One written project comprising two (2) parts (1000 words each part, total 2000 words) (50% each part, total 100%).

HHT1001 INTRODUCTION TO CHINESE MEDICAL LITERACY

Campus St Albans

Prerequisite(s) Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Read and write Chinese characters commonly used in Chinese medicine (e.g. herb names and the names of acupuncture points) and briefly outline the history, development and structure of the Chinese language;
2. Use correct stroke order when writing Chinese characters;
3. Correctly pronounce common Chinese medicine terms;
4. Read and write common Chinese medicine terms in pin yin using the four tone marks;
5. Demonstrate the use of a Chinese-English Pin Yin Chinese Medicine terminology dictionary;
6. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Basic terms in Chinese medicine including; names of commonly used herbs, names of common acupuncture points and general terminology used in Chinese Medicine theory; writing Chinese
HHT1002 FUNDAMENTALS OF CHINESE MEDICINE
Campus St Albans
Prerequisite(s) Nil
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Understand, apply and explain fundamental Chinese medical theories and their historical development including: Yin Yang Theory, Five Phase Theory, Zang-Fu Theory, Eight Guiding Principles [Ba Gang]; concepts of essence, qi, blood and body fluids [jing, qi, xue, jin ye]; meridians and collaterals [jing luo]; basic classification of disharmonies (bien zhen lun zhi); aetiology and pathogenesis of disease, the relationship between disease, syndromes and symptoms; treatment principles (ben and biao, reinforcement, reduction) and therapeutic methods; illness prevention; the psyche in Chinese medicine.
2. Explain basic herbal properties and functions according to CM herbal theories, including the four qing (sheng, jing, huo, zhi), five tastes (wu wei) and four directions; concepts of toxicity, compatibility and incompatibility, cautions and contraindications of herbs; basic classification of herbs and quality of herbs;
3. Discuss the importance of the relationships between the Eight Guiding Principles, diagnosis and treatment in Chinese medicine;
4. Demonstrate the development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
The clinical gaze of Chinese medicine: overview of historical and philosophical context; function and dysfunction according to Chinese Medicine; introductory illness states – Yin Yang, Wu Xing, Qi, Xue, Jin Ye, Ba Gang; psyche according to Chinese medicine; causes and occurrences of disease, Zang Fu organ system, Curious Fu; introduction to diagnostic methods; Zang Fu xun lu relationships; mechanisms of disease development; basic herbal properties, functions and theories: Si Qi, Wu Wei, four directions, courier herbs, classification, compatibility, cautions, contraindications, quality, harvesting.

Recommended Reading

Recommended Reading

Recommended Reading

Required Reading

Recommended Reading

SCHOOL OF HEALTH SCIENCES

HHT1005 CHINESE MEDICAL DIAGNOSIS AND PATHOGENESIS 1
Campus St Albans
Prerequisite(s) Nil
Learning Outcomes
1. Analyze the presentation of symptoms using bian zheng lun zhi according to main Chinese medicine theories including Yin Yang Theory, Five Phase (Wu Xing) Theory, Zang-Fu Theory, Theory of Qi, Blood and Body Fluids (fundamental substances) and Meridian Theory (Jing Luo);
3. Describe the aetiology [internal, external and non-internal non-external factors] and pathogenesis of symptom presentation (as they relate to changes in zang-fu, fundamental substances [essence, qi, blood, body fluids], meridians and collaterals [jing-luo], the six meridians, four levels and san jiao);
4. Utilize the four examinations;
5. Differentiate between pathogenic attacks on organs, meridians, fluids and qi and suggest appropriate treatment principles for each;
6. Outline clear, logical and accurate therapeutic objectives;
7. Discuss the type and level of treatment according to the Eight Guiding Principles and bian zheng lun zhi and concepts of ben and biao, reinforcement and reduction;
8. Link the pathogenesis of symptom manifestation to treatment principles and appropriate acupuncture point and individual herb selection;
9. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness.

Content
The four examinations; the eight principles of diagnosis;
Additional Oriental diagnostic methods e.g., hara diagnosis; the aetiology and manifestation of the energetic patterns of disharmony as they pertain to the jing luo, xu xing, zang fu and fundamental substances; etiology and pathomechanisms of symptom presentations; methods of differential diagnosis; overview of febrile disease differentiation – six channels, four levels, San Jiao syndromes; case histories and individual differential diagnosis; Materia Medica and Jing-luo system consolidated in relation to diagnostic treatment design.

Recommended Reading

Additional Statements
Workshops have a hurdle requirement of at least 80% attendance.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact: Hours Six hours per week or equivalent for one semester comprising lectures, tutorials, workshops and self managed learning activities.

Assessment: One combined practical and oral examination (50%) (hurdle requirement); one final examination (50%). This unit is a hurdle requirement.

Additional Statements: Workshops have a hurdle requirement of at least 80% attendance.

HHT1007 CHINESE PHARMACOPEIA
Campus St Albans
Prerequisite(s): Nil.

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:

1. Utilize the five (5) flavours and four natures theories to predict functions of herbs and foods
2. Explain the seven (7) effects of herbs and the four (4) directions theory in prescribing herbs (placing into historical context the development of herbal medicine theory).
3. State the traditional nineteen (19) antagonisms and eighteen (18) incompatible substances (and explain the concept of toxicity in Chinese medicine and the regulatory restrictions in Australia that restrict access to and use of potentially toxic Chinese herbs and endangered species and their ethical implications).
4. Utilize channel tropism theory and name the traditional categories of herbs and foods
5. Explain the naming protocols used in Chinese medicine
6. Recognize the names of herbs using pinyin transliteration, common name or Latin binomial
7. Recognize selected processed herbs on sight
8. Classify herbs and foods according to traditional categories
9. Describe in detail major examples of herbs for each category, including botanical description, harvesting, preparation detail, nature, taste, dosage, indications, functions, cautions and contraindications and toxicity
10. Select herbs of similar properties for different clinical situations
11. Relate the functions of herbs to basic herbal medicine theories
12. Demonstrate development and consolidation of attributes in effective problem solving skills and clinical reasoning, information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness

Content: The historical development of Chinese herbal medicine; the properties of the Chinese Materia Medica; major herb theories, precautions, contra-indications, dosage, naming of herbs: regions, colours, plant parts, names and alternatives; the categories of the Materia Medica, the most commonly used herbs and foods and their classification according to herb theories. The herbs of the Materia Medica: release exterior, clear heat, drain downward, drain dampness, expel wind-damp, transform phlegm and stop cough, awkward transform dampness, relieve food stagnation, regulate qi, regulate xue, warm interior and expel cold, tonifying, (Qi, Yang, Yin, Xue) restrain essence, (stabilise and bind) Shen calming, orifice opening, extinguish wind and stop tremors.


Class Contact: Hours Six hours per week or equivalent for one semester comprising lectures, tutorials and self-managed learning activities.

Assessment: One combined practical and oral exam (30%) (hurdle requirement); one assignment (1200 words) (40%); one 2-hour theory examination (30%). This unit is a hurdle requirement.

The VU generic Core Graduate Attributes assessed in this unit are: P2,I2,O2,W2,A2,C2,D2.

HHT1009 INTRO TO CHINESE MEDICINE CLINICAL PRACT
Campus St Albans, Flinders Lane, Off Campus
Prerequisites: HHT1002 Fundamentals of Chinese Medicine; or equivalent.

Co-requisites: RBM1910 Microbiology for Chinese Medicine Practitioners; or equivalent.

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:

1. Demonstrate skills as a beginning assistant in the clinical context (including demonstrating a professional approach to clients, adherence to principles of hygiene);
2. Work as part of a team in clinical practice;
3. Demonstrate reception skills, including managing clients (greeting, seating and directing clients, maintaining the privacy of clients), handling telephone enquiries, making appointments, managing client records (storing, retrieving, updating and preserving confidentiality) and handling of payment;
4. Discuss and reflect on their observations and experiences from a CM perspective;
5. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Students will be introduced to the Clinical Manual and the clinical CD-ROM, which outlines in detail the policies and procedures that apply to practising Chinese medicine in the School of Health Sciences Teaching Clinics and other approved settings. Topics include issues in relation to acupuncture and herbal medicine practice and dispensing; minimization of cross infection; documentation of patient records; the role of a clinical assistant; reception duties; client care; professional behaviour; contributions to case history discussions; the Health Records Act and other policies and procedures that relate to the workings of the School of Health Sciences Teaching Clinics. Clinical experience is gained through assisting in acupuncture and herbal medicine practice. In addition, students will be engaged in tasks associated with running a viable and efficient Chinese medicine clinic including administration and client contact at reception and the preparation of treatment rooms.


Recommended Reading To be advised by the lecturer.

Class Contact A minimum of forty-eight (48) hours or equivalent in approved clinical setting(s) normally spread across one entire semester.

Assessment Supervised placement comprising successful completion of required 48 clinical hours (at least 50% of required hours in each of acupuncture and Chinese herbal medicine) (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement). Any failed assessment item will need to be discussed in the first instance with the Clinical Coordinator. This unit is a hurdle requirement.

Additional Statements Clinical Placement has a hurdle requirement of 100% attendance.

HHT1100 INTRODUCTION TO HEALTH ENHANCEMENT

Campus St Alabns

Prerequisites Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Explain at a basic level the principles and methods of health preservation and enhancement in Chinese medicine.
2. Perform basic Qi Gong and Tai Ji Quan techniques
3. Describe the key features required for a balanced lifestyle from the Chinese medical perspective.
4. Explain the benefits of tai ji quan and qi gong exercises sufficient for a lay person to understand.
5. Explain the importance of a balanced diet and lifestyle in the preservation of health.
6. Demonstrate consolidation and establishment of attributes in self-care and wellness management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Introduction to the idea of Qi, Qi gong Practices, tai ji quan and Qi in the environment. Introduction to Chinese medicine health enhancement principles and modalities.


Recommended Reading Zhang, YH & Rose K 2001, A brief history of qigong. Paradigm Publications, Brookline, Massachusetts

Class Contact Two (2) hours per week or equivalent for one semester comprising lectures, tutorials and workshops. Students should reasonably expect to devote additional private contact hours of at least 2-3 times more than the stipulated class contact hours.

Assessment One combined practical and oral examination (100%) (proficiency standard hurdle requirement). All assessment items address the CGA levels as indicated in the Learning Outcomes.

HHT1101 ACUPUNCTURE POINT LOCATION 1

Campus St Alabns

Prerequisite(s) Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Accurately locate the acupuncture points utilizing proportional measurements and surface landmarks;
2. Outline the composition and function of the Jing Luo system and the distribution and connection of each of the various components of the system;
3. Describe the surface anatomy associated with locating and needling acupuncture points;
4. Describe the depths of needling of acupuncture points;
5. State the contraindications of specific acupuncture points;
6. State the general features and functions of the acupuncture points, the categories of acupuncture points and their significance, and the naming and numbering of the acupuncture points;
7. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Introduction to Jing-loo theory and an overview of acupuncture point function and dynamics; proportional measurements; gross surface anatomy as it pertains to the location and depth of acupuncture points; location of acupuncture points on the 12 primary meridians, Ren Mai and Du Mai, and the major extra-ordinary channels; contraindications of specific acupuncture points; depths of needling of acupuncture points; Naming and numbering of the acupuncture points.


Class Contact Hours The equivalent of 60 hours for one semester comprising lectures, and workshops.

Assessment One practical examination (50%) (proficiency standard hurdle requirement); one written examination (50%) (hurdle requirement). This unit is a hurdle requirement.

Additional Statements Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated class contact hours. Workshop sessions have a hurdle requirement of at least 80% attendance.

HHT1127 MINOR THESIS – FULLTIME

Campus St Alabns

Prerequisite(s) Nil

Content The minor thesis provides students with an opportunity to extend their knowledge and ability to critically analyse issues specific to primary health care and to engage in independent inquiry in an area of professional interest. The thesis will be a research paper and will provide evidence of independent research which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and analyse, interpret and present data. The thesis should demonstrate a high standard of written communication skills. A supervisor will be appointed to support and oversee the student's research according to guidelines established by the Department of Health Sciences.

Required Reading To be advised by supervisor.

Subject Hours HHT1127 Minor Thesis (full-time), nine hours per week in semester one; HHT1137 Minor Thesis (full-time), twelve hours per week in semester two; HHT1147 Minor Thesis (part-time), three hours per week in semester one; HHT1157 Minor Thesis (part-time), six hours per week in semesters two, three and four.

Assessment One 15,000-20,000 word paper.

HHT1137 MINOR THESIS – FULLTIME

Campus St Alabns

Prerequisite(s) Nil

Content The minor thesis provides students with an opportunity to extend their knowledge and ability to critically analyse issues specific to primary health care and to engage in independent inquiry in an area of professional interest. The thesis will be a research paper and will provide evidence of independent research which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and
HHT1147 MINOR THESIS – PART-TIME
Campus St Albans
Prerequisite(s) Nil
Content The minor thesis provides students with an opportunity to extend their knowledge and ability to critically analyse issues specific to primary health care and to engage in independent inquiry in an area of professional interest. The thesis will be a research paper and will provide evidence of independent research which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and analyse, interpret and present data. The thesis should demonstrate a high standard of written communication skills. A supervisor will be appointed to support and oversee the student’s research according to guidelines established by the Department of Health Sciences.
Required Reading To be advised by supervisor.
Subject Hours HHT1127 Minor Thesis (full-time), nine hours per week in semester one; HHT1137 Minor Thesis (full-time), twelve hours per week in semester two; HHT1147 Minor Thesis (part-time), three hours per week in semester one; HHT1157 Minor Thesis (part-time), six hours per week in semesters two, three and four.
Assessment One 15,000-20,000 word paper.

HHT1157 MINOR THESIS (PART-TIME)
Campus St Albans
Prerequisite(s) Nil
Content The minor thesis provides students with an opportunity to extend their knowledge and ability to critically analyse issues specific to primary health care and to engage in independent inquiry in an area of professional interest. The thesis will be a research paper and will provide evidence of independent research which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and analyse, interpret and present data. The thesis should demonstrate a high standard of written communication skills. A supervisor will be appointed to support and oversee the student’s research according to guidelines established by the Department of Health Sciences.
Required Reading To be advised by supervisor.
Subject Hours HHT1127 Minor Thesis (full-time), nine hours per week in semester one; HHT1137 Minor Thesis (full-time), twelve hours per week in semester two; HHT1147 Minor Thesis (part-time), three hours per week in semester one; HHT1157 Minor Thesis (part-time), six hours per week in semesters two, three and four.
Assessment One 15,000-20,000 word paper.

HHT1158 MINOR THESIS PART-TIME
Campus St Albans
Prerequisite(s) Nil
Content The minor thesis provides students with an opportunity to extend their knowledge and ability to critically analyse issues specific to primary health care and to engage in independent inquiry in an area of professional interest. The thesis will be a research paper and will provide evidence of independent research which demonstrates the ability to define a problem, undertake a detailed literature review, develop a research design appropriate to the topic and collect and analyse, interpret and present data. The thesis should demonstrate a high standard of written communication skills. A supervisor will be appointed to support and oversee the student’s research according to guidelines established by the Department of Health Sciences.
Required Reading To be advised by supervisor.
Subject Hours HHT1127 Minor Thesis (full-time), nine hours per week in semester one; HHT1137 Minor Thesis (full-time), twelve hours per week in semester two; HHT1147 Minor Thesis (part-time), three hours per week in semester one; HHT1157 Minor Thesis (part-time), six hours per week in semesters two, three and four.
Assessment One 15,000-20,000 word paper.

HHT11201 ACUPUNCTURE POINT LOCATION 2
Campus St Albans.
Prerequisites HHT1101 Acupuncture Point Location 1; or equivalent.
Co-requisites Nil
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Accurately locate the 400 acupuncture points (including extra points) utilizing proportional measurements and surface landmarks;
2. Outline the composition and function of the Jing Luo system and the distribution and connection of each of the various components of the system;
3. Describe the surface anatomy associated with locating and needling acupuncture points;
4. Describe the depths of needling of acupuncture points;
5. Discuss the contraindications of specific acupuncture points;
6. Explain the general features and functions of the acupuncture points, the categories of acupuncture points and their significance, and the naming and numbering of the acupuncture points;
7. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.
Content Extension and integration of Jing-luo theory and acupuncture point function and dynamics; proportional measurements; gross surface anatomy as it pertains to the location and depth of acupuncture points; location of acupuncture points on the 12 primary meridians, Ren Mai and Du Mai, and the major extra-ordinary channels; contraindications of specific acupuncture points; depths of needling of acupuncture points. Naming and numbering of the acupuncture points.


Class Contact Five (5) hours per week or equivalent for one semester comprising lectures and workshops. Students should reasonably expect to devote additional private contact hours of at least 2-3 times more than the stipulated class contact hours.

Assessment One practical examination (50%) (proficiency standard hurdle requirement); one written examination (50%) (hurdle requirement). This is a hurdle requirement.

Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 2-3 times more than the stipulated class contact hours. Workshops have a hurdle requirement of at least 80% attendance.

HHT2000 HEALTH ENHANCEMENT (YANG SHENG)
Campus St Albans
Prerequisite(s) Nil
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Explain the principles and methods of health preservation and enhancement in Chinese medicine;
2. Outline the features of a balanced lifestyle from the Chinese medical perspective;
3. Discuss the principles of mental cultivation and the relationship between mental state, lifestyle, disease and longevity;
4. Evaluate the principles of TCM dietary regulation and explain the use of diet in the maintenance of health;
5. Demonstrate the preparation and explain the functions of specific health food dishes;
6. Evaluate the use of Chinese medical dietary therapy in the treatment of common diseases;
7. Explain the principles of TCM health preservation and enhancement through physical and breathing exercises;
8. Demonstrate specific physical and breathing exercises;
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content The medicinal use of foods, the use of foods to prevent disease and maintain health, Chinese dietary theory and practice, the role of lifestyle activities, the meaning of mental cultivation, breathing and physical exercises (introduction to Tai Qi or Qi Gong).


HHT2003 CHINESE MEDICAL DIAGNOSIS AND PATHOGENESIS 2
Campus St Albans
Prerequisite(s) HHT1005 Chinese Medical Diagnosis and Pathogenesis 1; HHT1006 Acupuncture Point Location; HHT1007 Chinese Pharmacopea; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Demonstrate correct use of the four data collection methods (inquiry, inspection, auscultation/olfaction, and palpation); 2. Interpret the significance of signs and symptoms, including tongue and pulse; 3. Record cases histories indicating various signs and symptoms, with notes on their significance; 4. Explain the guiding principles of Chinese medicine diagnosis (including the concepts of and interrelationships among symptom, syndrome and disease); 5. Analyse presentations of signs and symptoms using pattern differentiation systems including the Eight Guiding Principles , Zang Fu Theory (with an emphasis on combined patterns of disharmony), Theory of Qi Xue Jing Ye, and Theory of Jing Lu (Meridians and Collaterals), and explain the aetiology and pathogenesis of such signs, symptoms and syndromes, and the treatment principles; 6. Describe the relationship between Liu Jing (Six Stages) identification and Zang-fu Theory identification; 7. Describe and contrast the pattern differentiation systems of the Liu Jing (six stages), the Wei Qi Ying Xue (four divisions) and the San Jiao (including main syndromes, aetiology and pathogenesis, and treatment principles); 8. Provide a rationale for the relevant Chinese herbal medicine and acupuncture treatments; 9. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning: information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Further development of four of the 'four examinations', including palpation of channels, points and Hara diagnosis; detail of the differential diagnostic process; disease aetiology illness, Jing lu syndromes, Zang-fu mixed syndromes, febrile disease differentiation – six channels complicated patterns; Wen Bing detail combining Zang Fu, San Jiao and Latent diseases; examination of tongue, skin, and teeth; diagnosis and case histories; individual symptom differentiation; application of Materia Medica and Jing-luo theory in relation to diagnostic outcomes.


Class Contact Hours The equivalent of 72 hours for one semester comprising lectures, seminars, workshops.

Assessment One assignment (1200 words) (30%); one combined practical and oral assessment (30%) (hurdle requirement); one final examination (40%). This unit is a hurdle requirement.
Additional Statements: Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated class contact hours. Workshop sessions have a hurdle requirement of at least 80% attendance.

HHT2009 PHARMACOPOEIA AND DISPENSING
Campus St Albans
Prerequisite(s) HHT1005 Chinese Medical Diagnosis and Pathogenesis 1; HHT1007 Chinese Pharmacopoeia; or equivalents.

Student Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Classify herbs according to their traditional categories; 2. Describe in detail the less commonly used herbs for each category, including botanical description, harvesting, preparation detail, nature, taste, dosage, indications, functions, cautions and contraindications and any restrictions on use or access due to Australian regulations; 3. Explain when herbs processed in the clinic dispensary or lesser-used herbs are preferred over the more commonly used herbs; 4. Discuss how different forms of processing alter the basic qualities of herbs; 5. Discriminate amongst herbs similar in visual appearance (and discriminate quality of herbal substances); 6. Prepare wholesale herbs for specialised processing and describe the requirements for storage of herbal medicinal substances; 7. Demonstrate different techniques of pao zhi, such as Chao, Mi Zhi, Jiu Zhi, Cu; 8. Describe and demonstrate different preparation methods for dispensing, such as decoction, infusion, boluses, sausages, pills, syrups, plasters, and medicinal wines; 9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsibilities.

Content
The lesser used herbs from the categories of the Materia Medica: release exterior, clear heat, drain downward, drain dampness, expel wind-damp, transform phlegm and stop cough, aromatically warm interior and expel cold, tonifying, (Qi, Yang, Yin, Xue) restrain transform dampness, relieve food stagnation, regulate qi, regulate xue, awareness and responsiveness.

Required Reading

Class Contact
The equivalent of 72 hours for one semester comprising lectures, tutorials and laboratories. Assessment: One written assignment (1200 words) (20%); one combined practical and oral examination (40%) (proficiency standard hurdle requirement); one 2-hour written theory examination (40%). This unit is a hurdle requirement.

HHT2100 FORMULAE AND STRATEGIES
Campus St Albans
Prerequisite(s) HHT1005 Chinese Medical Diagnosis and Pathogenesis 1; HHT1007 Chinese Pharmacopoeia; or equivalents.

Student Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Classify herbs according to their traditional categories; 2. Describe in detail the less commonly used herbs for each category, including botanical description, harvesting, preparation detail, nature, taste, dosage, indications, functions, cautions and contraindications and any restrictions on use or access due to Australian regulations; 3. Explain when herbs processed in the clinic dispensary or lesser-used herbs are preferred over the more commonly used herbs; 4. Discuss how different forms of processing alter the basic qualities of herbs; 5. Discriminate amongst herbs similar in visual appearance (and discriminate quality of herbal substances); 6. Prepare wholesale herbs for specialised processing and describe the requirements for storage of herbal medicinal substances; 7. Demonstrate different techniques of pao zhi, such as Chao, Mi Zhi, Jiu Zhi, Cu; 8. Describe and demonstrate different preparation methods for dispensing, such as decoction, infusion, boluses, sausages, pills, syrups, plasters, and medicinal wines; 9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsibilities.

Content
The lesser used herbs from the categories of the Materia Medica: release exterior, clear heat, drain downward, drain dampness, expel wind-damp, transform phlegm and stop cough, aromatically warm interior and expel cold, tonifying, (Qi, Yang, Yin, Xue) restrain transform dampness, relieve food stagnation, regulate qi, regulate xue, awareness and responsiveness.

Required Reading

Class Contact
The equivalent of 72 hours for one semester comprising lectures, tutorials and laboratories. Assessment: One written assignment (1200 words) (20%); one combined practical and oral examination (40%) (proficiency standard hurdle requirement); one 2-hour written theory examination (40%). This unit is a hurdle requirement.

Additional Statements
Clinical sessions have a hurdle requirement of at least 100% attendance.
5. Demonstrate correctness of acupuncture points; anatomy relevant to locating and needling of acupuncture points; anatomy relevant to the depths of needling acupuncture points; locating and correctly needling acupuncture points; the notion of intent as it applies in CM practice, needle sensation; obtaining the de Qi sensation; basic needle manipulation skills; moxibustion; management of needle accidents; contraindications for needling. Cupping in the context of needle techniques. The relationship between acupuncture point selection and ‘reading’ the radial pulse before and after needling. Jing-luo theory including the muscle-tendino meridians, luo mai, divergent meridians, internal pathways and the inter-relationships between the various elements and meridians; the functions and dynamics of the major categories of acupuncture points.

Required Reading


Recommended Reading


HHT2104 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 1

Campus: St Albans

Prerequisites: HHT2101 Acupuncture Point Location 2; RBM1910 Microbiology for Chinese Medicine Practitioners; or equivalents.

Student Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

1. Describe the surface anatomy associated with locating and needling acupuncture points;
2. Describe the depths of needling of acupuncture points;
3. Locate and correctly needle acupuncture points and obtain the de Qi sensation;
4. ‘Read’ the radial pulse;
5. Comply with aseptic techniques and procedures when penetrating the skin;
6. Demonstrate and ascertain the appropriateness of other techniques such as cupping, moxibustion or gua sha;
7. Discuss Jing-luo theory and its application to clinical practice;
8. Explain acupuncture point dynamics and function;
HHT2200 FORMULAE AND STRATEGIES 2

Campus St Albans
Prerequisite(s) HHT2100 Formulae and Strategies 1; or equivalent

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:

1. Place in context the history and development of Chinese medicine formulae;
2. Use the hierarchy of ingredients theory to combine herbs into formulae (be able to explain the principles for combining substances in formulae, analyse the composition and explain the principal actions of major formulae in particular formula categories and explain the relationship between formula categories and treatment strategies);
3. Use composition and change theories;
4. Explain the eight (8) treatment methods (and relate these to the formulae categories); expel dampness, treat phlegm, regulate qi, tonify qi, tonify yin, tonify yang, tonify blood, invigorate blood, stop bleeding, stabilise and bind, calm shen and others;
5. Discuss types and usages of formulae in the following categories: expel dampness, treat phlegm, regulate qi, tonify qi, tonify yin, tonify yang, tonify blood, invigorate blood, stop bleeding, stabilise and bind, calm shen and others;
6. Discuss the relationships amongst traditional pharmacopoeia and formula construction;
7. Discuss the compositions, functions, indications, contra-indications, applications, methods of preparation and administration and dosages of the traditional and some advanced formulary with a focus on the following formula categories: expel dampness, treat phlegm, regulate qi, tonify qi, tonify yin, tonify yang, tonify blood, invigorate blood, stop bleeding, stabilise and bind, calm shen and others (including how to advise patients on preparation, administration, cautions/contraindications and actions to take in event of unexpected adverse reaction);
8. Suggest modifications to formulae according to clinical presentations (including those necessary due to restrictions on access to and use of potentially toxic herbs and/or endangered species under Australian regulations);
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: The theoretical underpinning, relevance and application of eight extra meridians, the five transport points, special point groupings (e.g., hui meeting points, xi cleft, source (yuan), shokaten, window of heaven, six channel points, the mating of points, latent disease states, sun si miao’s 12 ghost points, the seven internal/external devil points, Zi wu liu zhui, eight influential points, entry and exit points, sea points and the nine rules of point selection to the practice of acupuncture.


HHT2203 CHINESE MEDICINE CLINICAL PRACTICE 2

Campus St Albans, Flinders Lane, Off Campus.

Prerequisites: HHT2003 Chinese Medical Diagnosis and Pathogenesis 2; HHT2011 Chinese Medicine Clinical Practice 1; or equivalents.

Student Learning Outcomes: On successful completion of this unit, students will be able to:

1. Participate in the day-to-day management and running of a Chinese medicine clinic by working as an assistant and as a member of the clinic team;
2. Perform routine client-based clerical and receptionist skills (including explaining general procedures involved in recording of patient details into files and maintaining client records) and assist in the clinic room (demonstrate the procedures involved in the management of a treatment room including the management of treatment equipment, hygiene handling of equipment and the proper preparation and storage of materials for acupuncture, moxibustion and cupping, changing of linen, cleaning of treatment surfaces prior to and after acupuncture treatment, cleaning of the treatment room and the removal of used equipment following a patient);
3. Develop their Chinese medical diagnostic skills from the perspective of Si zhen (including refining abilities in tongue and pulse diagnosis);
4. Display developing herb dispensing skills and knowledge such as correct storage and handling of herbs and work as part of a dispensary team (including demonstrating the processing of herbs, packaging of a herbal prescription, and observing hygienic procedures when preparing herbs);
5. Commence practicing moxibustion and other Chinese medicine therapeutic skills in the Clinic including demonstrating the hygienic handling, removal and disposal of needles and other waste following acupuncture treatment;
6. Use the checklist of criteria as a guide for on-going learning in the clinical setting;
7. Contribute to case history discussions and be able to respond at a basic level to patient’s enquiries about Chinese medicine (including herbal medicine and acupuncture);
8. Exhibit developing interpersonal skills with supervisors, fellow students and clients;
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Topics include: preparation of necessary acupuncture equipment for each clinic room; maintenance of client records, general procedures involved in managing files including: retrieving and storing of client files and main client records); and assist in the clinic room (demonstrate the procedures involved in the management of a treatment room including the management of treatment equipment, hygiene handling of equipment and the proper preparation and storage of materials for acupuncture, moxibustion and cupping, changing of linen, cleaning of treatment surfaces prior to and after acupuncture treatment, cleaning of the treatment room and the removal of used equipment following a patient);

1. Participate in the day-to-day management and running of a Chinese medicine clinic by working as an assistant and as a member of the clinic team;
2. Perform routine client-based clerical and receptionist skills (including explaining general procedures involved in recording of patient details into files and maintaining client records) and assist in the clinic room (demonstrate the procedures involved in the management of a treatment room including the management of treatment equipment, hygiene handling of equipment and the proper preparation and storage of materials for acupuncture, moxibustion and cupping, changing of linen, cleaning of treatment surfaces prior to and after acupuncture treatment, cleaning of the treatment room and the removal of used equipment following a patient);
3. Develop their Chinese medical diagnostic skills from the perspective of Si zhen (including refining abilities in tongue and pulse diagnosis);
4. Display developing herb dispensing skills and knowledge such as correct storage and handling of herbs and work as part of a dispensary team (including demonstrating the processing of herbs, packaging of a herbal prescription, and observing hygienic procedures when preparing herbs);
5. Commence practicing moxibustion and other Chinese medicine therapeutic skills in the Clinic including demonstrating the hygienic handling, removal and disposal of needles and other waste following acupuncture treatment;
6. Use the checklist of criteria as a guide for on-going learning in the clinical setting;
7. Contribute to case history discussions and be able to respond at a basic level to patient’s enquiries about Chinese medicine (including herbal medicine and acupuncture);
8. Exhibit developing interpersonal skills with supervisors, fellow students and clients;
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Topics include: preparation of necessary acupuncture equipment for each clinic room; maintenance of client records, general procedures involved in managing files including: retrieving and storing of client files, updating files, and preserving the confidentiality of client files; an introduction to the more complex methods of dispensing); an introduction to the more complex methods of dispensing); an introduction to the more complex methods of dispensing); an introduction to the more complex methods of dispensing); an introduction to the more complex methods of dispensing); an introduction to the more complex methods of dispensing)

HHT2205 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 2

Campus St Albans

Prerequisites: HHT2104 Acupuncture Needling: theory and Practice 1; RBM1910 Microbiology for Chinese Medicine Practitioners; or equivalents.

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:

1. Describe the surface anatomy associated with locating and needling acupuncture points;
2. Describe the depths of needling acupuncture points;
3. Locate and correctly needle acupuncture points and obtain the de Qi sensation for a range of acupuncture points including difficult-to-needle points;
4. Demonstrate more advanced needle manipulation skills;
5. ‘Read’ the radial pulse;
6. Comply with aseptic techniques and procedures when penetrating the skin;
7. Demonstrate a more advanced level and ascertain the appropriateness of other techniques such as cupping, moxibustion or gua sha;
8. Demonstrate plum blossom needling and three edged needle bleeding techniques;
9. Discuss Jing-luo Theory and its application to clinical practice;
10. Explain acupuncture point dynamics and function;
11. Describe the pathways and functions of the sinew (tendino muscle) meridians, divergent channels, luo mai and other adjunctive meridian systems;
12. Explain the roles of the Chinese Medicine practitioner in infection control and the management of needle accidents;
13. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Surface anatomy relevant to locating and needling of acupuncture points; anatomy relevant to the depths of needling acupuncture points; locating and correctly needling acupuncture points; the notion of intent as it applies in CM practice, more advanced needle manipulation skills; obtaining the de Qi sensation; moving Qi; advanced moxibustion and cupping skills; management of needle accidents; contraindications for needling. Review of cupping in the context of needle techniques. The relationship between acupuncture point selection and ‘reading’ the radial pulse before and after needling. Introduction to gua sha, plum blossom needling and three-edge bleeding techniques. Jing-luo theory including the muscle-tendino meridians, luo mai, divergent meridians, internal pathways and the inter-relationships between the various elements and meridians; the functions and dynamics of the major categories of acupuncture points. Safety issues; review of aseptic procedures, infection control and risk management strategies.


**Recommended Reading**


**Class Contact**

Five hours per week or equivalent for one semester comprising lectures, tutorials and workshops. Students should reasonably expect to devote additional private contact hours of at least 2-3 times more than the stipulated class contact hours.

**Assessment**

Class participation (80% participation in tutorials, workshops and laboratory activities) (pass/fail) (hurdle requirement); one combined practical and oral examination (50% each) (proficiency standard hurdle requirement); one written examination (50%).

**Additional Statements**

Workshops have a hurdle requirement of at least 80% attendance.

**Content**

This unit explores and reflects upon the evolution of current popular counselling techniques. The unit allows the student to experience how they may adapt counselling techniques to the CM framework of clinical practice. This unit explores many facets of the client/practitioner relationship, ethical issues, professionalism and confidentiality. Preparation for the student’s future role as a primary health care CM practitioner, the unit will also cover such topics as death and dying; trauma; sexual, emotional and physical abuse; the elderly; and cross-cultural counselling.

**Required Reading**

scar therapy; the use of electronic devices including electro-
acupuncture, laser and TENS in micro-system point location, diagnosis
and therapy; further application of chrono-acupuncture; magneto-
therapy theory and practice; combined micro-system and body
acupuncture point treatment principles and protocols; discrimination in
the selection and application of the various techniques of micro-
systems treatments.

**Required Reading**


**Recommended Reading**


in systems of correspondence. The American Journal of acupuncture,
18, (2), 141-162.


Acupuncture (revised ed.). Hove: Journal of Chinese Medicine
Publications.


Huang, H.L. (trans.) (1974). Nanking Army Team Ear Acupuncture, A


of diseases with acupuncture and Chinese herbs. Edinburgh: Churchill
Livingstone.

Ming Shunpei & Yang Shunyi (1997). Advanced Textbook on
Auriculotherapy, Paris: Maisonneuve.


**Class Contact Hours**

Three hours per week or equivalent for one semester comprising lectures and workshops. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

**Assessment**

One combined practical and oral exam (50%) (proficiency standard hurdle requirement); one written examination (50%). All assessment items address the CGA levels as indicated in the Learning Outcomes.

---

**HHT3103 CHINESE MEDICINE CLINICAL PRACTICE 3**

**Campus** St Albans, Flinders Lane, Off Campus

**Prerequisite(s)**

Satisfactory completion of year 2 of the HBAH degree; or equivalent.

**Co-requisite(s)**

HHT3108 Chinese Medicine Therapeutic Applications; or equivalent

**Learning Outcomes**

On successful completion of this unit, students will be able to:

1. Demonstrate skills consistent with working successfully as an assistant practitioner and as part of a team within a Chinese medicine clinic;
2. Mentor junior students in the clinic;
3. Further develop their Chinese medical diagnostic skills from the perspective of Si Zhen;
4. Practice moxibustion, cupping, gua sha, shi liao and acupuncture in the clinical setting (including appropriate management of materials and equipment);
5. Consolidate their ability to select acupuncture points, practice safe needle insertion and manipulation (and explain how this can achieve specific therapeutic outcomes);
6. Work closely with final year students and supervisors discussing client management: diagnosis (including physical examinations as appropriate), treatment protocols, acupuncture point prescriptions and the suitability of herbal prescriptions, case history documentation (client records);
7. Correctly identify raw herbs, scrutinize a herbal prescription (for errors, omissions, incorrect dosage) and fill a herbal prescription (preparation, dispensing);
8. Explain treatment protocols and different preparation methods and uses of herbs to clients (including actions to be taken after finishing the prescription);
9. Use the checklists of criteria on placement expectations for ongoing learning in the clinical setting;
10. Explain the management and daily operation of the Chinese medicine clinic;
11. Exhibit developing interpersonal skills with supervisors, fellow students and clients;
12. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; Independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content**

Topics include: assisting the practitioner during treatment; applying moxibustion, needle manipulation as required; assisting with cupping, moxibustion, Shi liao and herbs; engage in discussion about developing a tentative diagnosis and treatment principle; carrying out therapeutic procedures as requested by the CM practitioner; review of standard operating procedures in dispensing herbs (herbal identification, use of scales, accurate, safe dispensing, ordering herbs, accounting procedures). Introduction to more complex methods of processing of herbs in preparation for continuation of the clinical program. Methods of Pao Zhi, moxibustion and acupuncture skills. The nature of pathogenesis and relationship to herbal prescriptions. Materia Medica substitutions, advanced herbal recognition.

**Required Reading**


**Recommended Reading**

To be advised by Lecturer.

**Class Contact Hours**

A minimum of seventy-two (72) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

**Assessment**

Supervised placement comprising successful completion of required 72 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory reports from clinical placement(s) (pass/fail) (hurdle requirement); combined practical and oral examination (proficiency standard hurdle requirement). Any failed assessment item will need to be discussed in the first instance with the Clinical Co-ordinator. This unit is a hurdle requirement.

**Additional Statements**

Clinical sessions have a hurdle requirement of at least 100% attendance.

---

**HHT3104 MAJOR CLASSICS – SHANG HAN LUN & WENG BING 1**

**Campus** St Albans

**Prerequisite(s)**

HHT2003 Chinese Medical Diagnosis and Pathogenesis 2; HHT2200 Formulas and Strategies 2; or equivalent

**Student Learning Outcomes:** On successful completion of this unit, it is expected that students will be able to:

1. Place in context the history and development of medical ideas encountered in the shang han and wen bing (and the Jing Gui Yao Lue, and reflect on the role of Six Meridian Theory and Theory of Wei, Qi, Ying and Xue historically and in modern practice and evidence-based research);
2. Apply methods of pattern identification from a shang han and wen bing perspective;
3. Discuss the specific diagnostic techniques used in wen bing;
4. Explain the relationship between liu jing bing zhen and wei qi ying xue biao zhen (including describing the key concepts of the Six Meridian Theory and Theory of Wei, Qi, Ying and Xue as systems of differentiation of syndromes, and comparing these theories with Zhang-fu Theory and the Theory of Triple Jiao);
5. Discuss and apply principles of treatment and appropriate formulae according to Shang Han and Wen Bing (for each of the syndromes, describe the sign-symptom complexes, key formulae and their component herbs, common modifications, any special preparation, indications, cautions and contraindications and comparisons with other formulae);

6. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
Shang Han Lun and Wen Bing as part of history of ideas in Chinese medicine. Underlying theories associated with these two texts. Comparison of the Shang Han and Wen Bing treatment strategies.

Assessment
Onset and transmission of disease according to Shang Han and Wen Bing. The concept of Pattern Identifications by the Six Channels. The application of the Eight Guiding Principles. The concept of externally contracted diseases caused by pathogenic cold and wind. Onset and transmission of wen bing diseases. Correlation of the Four Aspects with the Triple Jiao, and Six Channels, diagnosis of Wen Bing (fever, tongue, Ban, Zhen, Miliaria Alba), Fu xie (latent disease), Wen Bing treatment strategies. Character writing of terminology.

Required Reading


Study Guide compiled and translated by Greta Young on eReserve

Recommended Reading


Required Reading


Class Contact
Hours Five hours per week or equivalent for one semester comprising lectures and tutorials. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

Assessment
One assignment (1500-2000 words); one examination (70%). This unit is a hurdle requirement.

HHT3105 MAJOR CLASSICS-SHANG HAN LUN WENG BING 2
Campus St Albans
Prerequisite(s) HHT3104 Major Classics – Shang Han & Wen Bing 1; or equivalent

Student Learnings Outcomes
On successful completion of this unit, it is expected that students will be able to:

1. Apply methods of pattern identification from a shang han and wen bing perspective (including describing the sign-symptom patterns and transmuted patterns associated with the six meridians and sign-symptom patterns associated with the ‘four aspects’);

2. Describe the relationship between liu jing bian zheng and wei qi ying xue bian zheng;

3. Discuss and apply principles of treatment and appropriate formulae (and modifications) according to Shang Han and Wen Bing (in the treatment of a range of disorders including modern diseases);

4. Evaluate the latent pathogen theory and its modern application to treating auto-immune diseases;

5. Differentiate amongst pulse states according to symptom complex;

6. Justify the shang han and wen bing treatment strategies and formulae (including in the context of modern clinical practice and evidence-based research);

7. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
Further development of Shang Han Lun and Wen Bing as part of the history of ideas in Chinese medicine. Complex theories associated with these two texts. Onset, transmission and transmutation of disease. Complex presentations according to Shang Han and Wen Bing. Alternative uses of shang han and wen bing formulae.

Required Reading


Study Guide compiled and translated by Greta Young on eReserve

Recommended Reading


This unit will also include shen disturbances and 'modern diseases' amenable to Chinese medicine treatment.


Class Contact Hours Six hours per week or equivalent for one semester comprising lectures and tutorials. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

Assessment One final written cases examination (50%); one final written theory examination (50%). This unit is a hurdle requirement.

HHT3108 CHINESE MEDICINE THERAPEUTIC APPLICATIONS 1

Campus St Albans

Prerequisite(s) HHT2200 Formulae and Strategies 2; or equivalent

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Critically assess and reflect on the means by which a diagnosis is reached;
2. Demonstrate clinical skills in Chinese medicine diagnosis for Nei Ke conditions;
3. Classify Nei Ke disorders according to broad Chinese medicine disease categories;
4. Differentiate Nei Ke disorders according to Bian Zheng Lun Zhi;
5. Propose management strategies including practitioner advice, counselling and client self help tasks (including health preservation and enhancement advice, referral to other health practitioners);
6. Select and prescribe appropriate acupuncture point combinations (and moxibustion treatment), herbal formulae or both given the practitioner’s and student’s understanding(s) of the client’s condition(s) (and identify any cautions and contraindications for treatment and necessary actions in the event of an adverse reaction);
7. Apply specific clinical techniques to a range of particular conditions (including acupuncture, moxibustion);
8. Explain in modern terms and in plain English, proposed treatment strategies with respect to the client’s condition(s);
9. Explain the relationship between pulse-taking during the needling process, particularly in relation to the notion of moving Qi by needling;
10. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.


Class Contact Hours Five hours per week or equivalent for one semester comprising seminars and workshops. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

Assessment Class participation (80% attendance requirement and appropriate participation as outlined in the unit outline) (hurtle requirement); one assignment (1500 words) (40%); one practical examination and history taking (60%). To obtain at least a Pass in the unit, normally all components of assessment must be attempted and passed. Failed assessment items (assignment and practical examination) may be resubmitted or re-attempted once only. Maximum possible marks to be obtained on any resubmission or re-attempt will be 50%. Proficiency standard must be obtained on any re-attempted practical examination. This unit is a hurdle requirement.

Additional Statements Workshops have a hurdle requirement of at least 80% attendance.

HHT3111 CHINESE MEDICINE THERAPEUTIC APPLICATIONS 2

Campus St Albans

Prerequisite(s) HHT3106 Internal Medicine 1; HHT3108 Chinese Medicine Therapeutic Applications 1; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to achieve the following learning objectives at a more advanced level than achieved in HHT3108:

1. Critically assess and reflect on the means by which a diagnosis is reached;
2. Demonstrate clinical skills in Chinese medicine diagnosis for Nei Ke conditions;
3. Classify Nei Ke disorders according to broad Chinese medicine disease categories;
4. Differentiate Nei Ke disorders according to Bian Zheng Lun Zhi;
5. Propose and defend management strategies including practitioner advice, counselling and client self-help tasks (including health preservation and enhancement advice, referral to other health practitioners);
6. Select, justify and prescribe appropriate point combinations, herbal formulae or both given the practitioner’s and student’s understanding(s) of the client’s condition(s) (and identify any cautions and contraindications for treatment and necessary actions in the event of an adverse reaction);
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

7. Apply specific clinical techniques (including acupuncture, moxibustion) to a range of particular conditions;
8. Evaluate in professional terms and in plain English, proposed treatment strategies with respect to the client's condition(s);
9. Explain the relationship between pulse-taking during the needling process, particularly in relation to the notion of moving Qi by needling;
10. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
This unit further prepares students for their internship year.
Attention is given to diagnosis, treatment and management strategies (acupuncture and herbs), an in-depth exploration of contemporary treatment techniques and approaches, and the notion of yi (intent) as it applies to Chinese medicine. Critical analysis of case studies, approaches to acupuncture selection, discrimination between points and herbal prescription.

Required Reading

Required Reading

Recommended Reading


Class Contact
Hours Five hours per week or equivalent for one semester comprising seminars and workshops. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

Assessment
Class participation (80% attendance requirement and appropriate participation as outlined in the unit outline) (hurdle requirement); one final combined practical and oral examination (40%); one 3-hour final examination (60%). This unit is a hurdle requirement.

Additional Statements:
Workshops have a hurdle requirement of at least 80% attendance.

HHT3203 CHINESE MEDICINE CLINICAL PRACTICE 4

Campus St Albans, Flinders Lane, Off Campus
Prerequisite(s) HHT3103 Chinese Medicine Clinical Practice 3; or equivalent

Student Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Assume an increasing range of responsibilities in the management of clients in clinical settings;
2. Perform safely, competently and efficiently as assistants and as members of a team in Chinese medicine clinics;
3. Assist junior students to correctly identify raw herbs, correctly fill and scrutinise valid herbal prescriptions;
4. Mentor junior students in clinics;
5. Work closely with the final year Chinese medicine students and supervisors discussing cases, diagnoses (including physical examinations as appropriate), treatment protocols and acupuncture choices, needling strategies and herbal formulae prescriptions.

Prerequisite(s) HHT306 Internal Medicine 2; or equivalent

Student Learning Outcomes
On successful completion of this unit, it is expected that students, for the range of disorders outlined in the unit content, will be able to:
1. Classify disorders according to the CM framework;
2. Apply bian zheng lun zhi approaches to the differentiation of disharmonies;
3. Consolidate their ability to practice moxibustion, shi liao, and acupuncture, ear acupuncture, laser acupuncture and electro-acupuncture in the clinical setting (including selection and justification of acupoints and needling techniques, appropriate management of materials and equipment);
4. Explain treatment protocols and different preparation methods and uses of herbs to clients (including actions to be taken after finishing the prescription and in the event of an unexpected adverse reaction);
5. Use the checklist of criteria as a guide for on-going learning in the clinical setting;
6. Explain and justify the formulation of a diagnosis and treatment plan including an acupuncture and/or herbal prescription and explain how this achieves therapeutic aims;
7. Consolidate their ability to practice moxibustion, shi liao, and acupuncture, ear acupuncture, laser acupuncture and electro-acupuncture in the clinical setting (including selection and justification of acupoints and needling techniques, appropriate management of materials and equipment);
8. Explain treatment protocols and different preparation methods and uses of herbs to clients (including actions to be taken after finishing the prescription and in the event of an unexpected adverse reaction);
9. Use the checklist of criteria as a guide for on-going learning in the clinical setting;
10. Explain the management and daily operation of the Chinese medicine clinic;
11. Exhibit developing interpersonal skills with supervisors and colleagues;
12. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content
Topics include: moxibustion, cupping, gua sha, needle therapy, therapeutic massage and other techniques; and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Required Reading


Recommended Reading


Class Contact
Hours A minimum of one hundred and eight (108) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

Assessment
Supervised placement comprising successful completion of required 108 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); combined practical and oral examination (proficiency standard hurdle requirement). Any failed assessment item will need to be discussed in the first instance with the Clinical Coordinator. This unit is a hurdle requirement.

Additional Statements:
Clinical sessions have a hurdle requirement of at least 100% attendance.

HHT3207 INTERNAL MEDICINE 2

Campus St Albans
Prerequisite(s) HHT3106 Internal Medicine 2; or equivalent

Student Learning Outcomes
On successful completion of this unit, it is expected that students, for the range of disorders outlined in the unit content, will be able to:
1. Classify disorders according to the CM framework;
2. Apply bian zheng lun zhi approaches to the differentiation of disharmonies;
3. Devise treatment strategies that address the patterns of disharmony present in Nei Ke disorders;
4. Formulate interventions using herbal formulae or acupuncture prescriptions;
5. Formulate Chinese Medicine dietary therapy according to the differentiation of disorders;
6. Propose lifestyle modifications according to CM principles;
7. Determine the appropriateness of differing interventions (prescription of herbal preparations, acupuncture-moxibustion treatment, use of shi liao) according to the presentation including any cautions and contraindications and when referral to other health professionals is necessary;
8. Explain the relationships between the pathomechanics of disorders and the components of the treatment intervention (using herbal prescription or acupuncture);
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative problem solving and appropriate social and cultural awareness and responsiveness.

Content
This unit examines in detail traditional Chinese internal medicine (Nei Ke) based on the fifty-two disorders as specified in the classic the Jin Gui Yao Lue and additional disorders of clinical significance. The diagnosis of these disorders and their differentiation into patterns (zheng) according to the system of bian zheng lun zhi receives detailed attention. The origin of each disorder and the pathomechanisms by which its symptoms manifest and develop are discussed. The design of treatment interventions using herbal prescriptions, acupuncture, moxibustion and dietary therapy (shi liao) according to the differentiation of the disorder is examined. This unit will focus on gastrointestinal disorders, urological disorders, bleeding disorders, musculoskeletal disorders, disorders of the five sense organs and shen disturbances. This unit will also include musculoskeletal disorders, phlegm and ‘modern diseases’ amenable to Chinese medicine treatment.

Required Reading

Recommended Reading
Available on site or to borrow.

(For on site resources, book at the Information Desk)

Class Contact
Class Contact
Horours Six hours per week or equivalent for one semester comprising lectures and tutorials. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours.

Assessment
One oral case analyses examination (40%); one final written theory examination (60%). This unit is a hurdle requirement. All assessment items address the CGA levels as indicated in the Learning Outcomes.

HHT4002 RESEARCH METHODS FOR CHINESE MEDICINE

Campus St Albans
Prerequisites(s) Nil

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
1. Justify research in the field of Chinese medicine;
2. Identify research question in the field of Chinese medicine;
3. Describe various methods of research in quantitative and qualitative research;
4. Critique and evaluate research studies and articles, including those in Chinese medicine;
5. Identify ethical issues associated with conducting research, including CM research;
6. Discuss the requirements, limitations and applications of research in Chinese medicine clinical practice;
7. Discuss issues in the research process as they relate to evaluation of health care practice, programs and policy development;
8. Explain the roles of databases in research;
9. Explain, in professional and lay terms, research studies from the Chinese medicine literature;
10. Demonstrate development and consolidation of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative problem solving; and appropriate social and cultural awareness and responsiveness.

Content
Introduction to CM research design and methodology; paradigms of research; ways of obtaining CM knowledge; quantitative and qualitative research methods; research ethics; the application of the scientific method to CM research; non-experimental research designs; the evaluation of research; the computer as a research tool; scientific writing and the communication of research.

Required Reading
Recommened Reading

HHT4004 PROFESSIONAL ISSUES FOR CHINESE MEDICAL PRACTICE

For continuing students only
Campus St Albans
Prerequisite(s) Nil.
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Explain professional issues that impact on CM practice and the CM profession to the general public, peers and health practitioners (including the roles of continuing education and professional development in maintaining a practice);
2. Incorporate into their own working situations, (including how to research a clinic location, calculate the costs involved with setting up a new business, describe the government regulations, permits and guidelines for establishing a small business, establish clinic design, layout, clinical management and staffing policies);
3. Develop a vision of their own future practice;
4. Evaluate the facilities, services and other modalities, including sources of finance, available to practitioners establishing a practice;
5. Describe and identify the professional, legal and ethical requirements associated with a Chinese medicine practice (including the roles of continuing education and professional development in maintaining a practice); the government regulations, permits and guidelines for establishing a small business, establish clinic design, layout, clinical management and staffing policies); the regulatory requirements that impact on herbal medicine practice and dispensing);
6. Prepare short-term and mid-to-long term business plans for their own anticipated practices;
7. Provide solutions, including a range of marketing strategies, for typical and atypical dilemmas associated with establishing and maintaining a practice;
8. Discuss the features of selected alternative health care modalities and multi-disciplinary clinics;
9. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content Business management and planning. Market research, planning, advertising and promotion of a practice. Practice management: employer responsibilities, record keeping, taxation, workers compensation, legal and civil requirements. Department of Health regulations, local council regulations, licensing of premises, public risk, practitioner responsibilities; registration with the Chinese Medicine Registration Board of Victoria. Bioethical requirements of the profession as they relate to research and to professional practice. Community health: child support services, rehabilitation services, fertility clinics. Chinese medicine organizations: professional associations and accreditation, health funds and indemnity insurance, peer group associations both Australian and international, the current status of Chinese medicine in Australia and overseas; Chinese medicine and health education and promotion within the community. Exposure to alternative perspectives on health care, eg. osteopathy, chiropractic, physiotherapy, Alexander technique, naturopathy, European medical herbalism and homeopathy; psychology; working in various clinical settings.


HHT4005 CHINESE MEDICINE ACUTE INTERVENTIONS

For continuing students only
Campus St Albans
Prerequisite(s) HHT3202 Chinese Medical Specialties; or equivalents. 

Content Basic first aid, the diagnosis and treatment of acute conditions, and the management of acute onset of illness: the diagnosis, treatment, monitoring and management of clinical emergencies.


Recommended Reading To be advised by Lecturer. Subject Hours Forty (40) hours or equivalent for one semester comprising lectures, seminars and self-directed learning activities and attending a Level 2 First Aid Certificate course (24 hours). This subject will be delivered in its entirety before the mid semester break to allow students the opportunity to undertake their final clinical internship in China.

Assessment Satisfactory completion of Level 2 First Aid Certificate (pass/fail) (hurdle requirement); one theory examination (100%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Where the final examination is failed, a supplementary examination will be offered. The maximum possible mark on the supplementary examination will be 50%.

HHT4100 CASE CONFERENCING AND CLINICAL ISSUES 1

For continuing students only
Campus St Albans
Prerequisite(s): Satisfactory completion of year 3 of the HBAH degree; or equivalent.

Co-requisite(s): HHT4103 Chinese Medicine Clinical Internship 1. HHT4108 Chinese Medicine Traumatology; or equivalents.

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
1. Apply advanced CM theory and clinical practice theory to cases typically presenting at clinic;
2. Retrieve and evaluate scientific articles and other electronic material applicable to specific and common case presentations in a range of CM clinical specialties;
3. Explain the rationale of diagnoses and treatment selections including point and herb functions in terms of Chinese medicine theory and pathophysiology;
4. Discuss the protocol of the Bian Zheng Lun Zhi method of prescribing treatments;
5. Design and present holistic treatment strategies and plans, incorporating the principles of health preservation, with particular emphasis to an Australian patient base;
6. Communicate case material in a professional style sufficient to facilitate effective handover;
7. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content**
This unit integrates Chinese medicine theory and practice via interrogation of student case presentations. Case presentations will be determined by the experiences of students when treating clients. The focus will be on commonly seen cases in the Chinese medicine clinical specialties. The unit reinforces aspects of aseptic procedures; history taking; principles of diagnosis; treatment protocols; herb and point functions; dosages; a range of treatment skills: legal issues; and interpersonal and professional communication skills.

**Required Reading**

**Recommended reading**


**Class Contact Hours**
The equivalent of 48 hours for one semester comprising seminars of workshops, and directed research and other learning activities.

**Assessment**
Class participation (80% attendance requirement as well as participation as stipulated in the unit tutorial guidelines) (pass/fail) (hurdle requirement); two case conference seminars comprising one clinical review and one report in the designated assessment week(s) (Satisfactory/Unsatisfactory). This unit is a hurdle requirement. All assessment items address the CGA levels as indicated in the Learning Outcomes.

**Additional Statements**
Workshops have a hurdle requirement of at least 80% attendance.

**HHT4101 CHINESE MEDICINE OBSTETRICS AND GYNAECOLOGY**
Campus St Albans

**Prerequisite(s)**
HHT3207 Internal Medicine 2; or equivalent.

**Student Learning Outcomes**
On successful completion of this unit, it is expected that students will be able to:
1. Place in context the history and development of CM gynaecology and obstetrics;
2. Discuss the concept of Yue Jing (period) according to Chinese medicine;
3. Discuss the relationship between the Bao Gong (uterus) and the Jing-Lou;
4. Classify gynaecological disorders according to broad Chinese medicine disease categories;
5. Differentiate gynaecological disorders according to the Bian Zheng Lun Zhi method of CM (including descriptions and discussions of the main symptoms and principal syndromes, and the aetiology and pathogenesis of female urogenital, gynaecological and obstetric disorders and the relationship between symptom pattern and disease mechanism);
6. Evaluate gynaecological conditions for their suitability for treatment with Chinese medicine (including identifying any cautions and contraindications and potential disease complications which need to be considered in the treatment of the main gynaecological and obstetric disorders); and possible needs to refer to outside health professionals including western medical;
7. Apply Chinese medical perspectives and treatment methods for conception, maintaining the health of the mother and foetus during pregnancy and apply various Chinese medical techniques (especially acupuncture) during labour;
8. Evaluate the general treatment principles applied in CM gynaecology and obstetrics;
9. Identify selected Materia Medica, including main formulae and modifications, relevant to Chinese medicine gynaecology and obstetrics;
10. Predict potential drug-herb interactions and explain the actions necessary in the event of an adverse reaction;
11. Evaluate roles for the treatment modalities, including herbal medicine, acupuncture and moxibustion, used in gynaecological conditions;
12. Evaluate roles for hygiene and diet in the prevention and treatment of gynaecological conditions;
13. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content**
This unit examines the Chinese medicine clinical specialty of gynaecology with particular reference to treating gynaecological disorders with Chinese herbal formulae and acupuncture. Emphasis is on selected Materia Medica. The specialised role of acupuncture in obstetrics, including labour, and the role of Chinese medicine in relation to fertility and IVF are also examined. Professional issues in the patient-CM practitioner relationship and ethical issues in gynaecology and obstetrics in the Australian context are raised throughout.

**Required Reading**

**Recommended Reading**

**Additional statements**
One assignment (1500 words) (50%); one 3-hour examination (50%). This unit is a hurdle requirement for graduation.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:

1. Use advanced acupuncture and Chinese medicine theory;
2. Demonstrate professional skills, attitude and presentation;
3. Reflect on their experience of the consultation process (including diagnosis, treatment approaches and communication skills);
4. Conduct a comprehensive Chinese medical assessment including procedures to minimize patient distress, embarrassment or risk of injury, and treatment strategy;
5. Demonstrate understanding of the indications for and skillful use of relevant clinical diagnostic equipment and interpretation of commonly used western diagnostic tests (and describe how results of western diagnostic tests may influence CM diagnosis and treatment strategies);
6. Obtain feedback from clients and explain to the client the clinical significance of both negative and positive findings in plain English;
7. Locate and needle accurately and safely acupuncture points appropriate to client needs;
8. Demonstrate proficiency in use of and understand the indications for use of therapeutic techniques including: moxa, cupping, gua sha, point injection therapy, dermal hammer, laser, ear acupuncture, electric stimulator and Chinese herbal medicine;
9. Demonstrate proficiency in dispensing of a herbal medicine prescription including advice and instructions to clients in preparation and administration of herbal prescriptions (including what to do in the event of an adverse reaction);
10. Demonstrate understanding of the necessary requirements of and proficiency in maintenance of a herbal dispensary (including understanding requirements for labelling and storage, inventory and contamination control);
11. Record case notes in a professional manner (legal, legible, accurate, orderly) that would satisfy professional guidelines and would withstand legal scrutiny;
12. Assess the client’s needs for ongoing treatment or referral, plan a treatment strategy according to the course of treatment and any dietary and lifestyle recommendations to the client in plain English;
13. Laise and work effectively with clinical educators;
14. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: Students undertake their final year clinical placement as the Intern Practitioner in approved settings. Students are required to spend approved clinical settings to gain broad clinical experience in both content and practice. The Intern Practitioner is the student practitioner is required to work closely with junior students to assist them in the development of clinical skills. Students must have completed all other units of the course and meet the requirements of the Clinical Practicum. Students must submit an approved competency report to their supervisor to confirm their readiness to start their clinical placement. Students must also have completed the Internship Mentor: Final year students are required to be approved. The Internship Mentor: The student practitioner is responsible for the following:

1. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

2. Describe external and internal causes of injury and wounds, the reactions of the body to injury and the processes of healing;
3. Describe the aetiology, pathogenesis, main symptomatology, diagnosis and differential diagnosis (CM syndromes) of common neurological disorders and musculoskeletal conditions, including soft tissue injuries, dislocations and fractures;
4. Describe the ranges of movements for particular joints and muscle groups from a regional anatomy perspective;
5. Perform traditional and contemporary musculoskeletal assessment and muscle energy release techniques, e.g., MET, SOT, or equivalents.
6. Relate various muscle energy release techniques to the jing luo system;
7. Evaluate musculoskeletal and neurological conditions for their suitability for treatment with CM and possible needs to refer to outside health professionals including western medical;
8. Predict and identify potential cautions, contraindications and adverse reactions of particular CM therapies and discuss actions necessary in the event of an adverse event;
9. Evaluate roles for acupuncture, point injection therapy, laser therapy, herbal preparations (external and internal), tu na, cupping, moxibustion, gua sha exercise and nutritional therapies in the treatment of musculoskeletal and neurological disorders;
10. Devise Chinese medicine treatment protocols and management plans consistent with the diagnosed musculo-skeletal and neurological conditions and demonstrate skills in appropriate therapies (including manual reduction and rehabilitation exercises);
11. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content: This unit consolidates theory and practice from previous units and applies the information to the use of specific musculo-skeletal and neurological disorders including an in-depth exploration of pain, including its explanation in Chinese medical terms. Emphasis is given to history taking and physical examination of the musculo-skeletal system. Various traditional and contemporary musculo-skeletal assessment techniques, the relationship between...
musculo-skeletal dysfunction and the jing luo system, and the application and monitoring of acupuncture and herbal treatment of patients with musculo-skeletal dysfunction are explored. Material will include in-depth analysis of treatment and management of pain, Bi syndrome and Wei syndrome, regional disorders, spinal disorders, limbs, musculoskeletal rehabilitation, recreational and sports injuries, Chinese medical diagnosis of specific musculo-skeletal and neurological disorders; the application of internal and external herbal treatments; the significance of drug-herb interactions as applicable to musculo-skeletal and neurological disorders, rehabilitative exercises specific to particular musculo-skeletal and neurological disorders; the protocols and application of acupuncture, point injection therapy, laser therapy, tu na, cupping, moxibustion, gua sha exercise and nutritional therapy as applicable to musculo-skeletal and neurological disorders as well as the treatment and management of sporting injuries.

**Required Reading**


**Assessment**

One combined practical and oral musculo-skeletal examination (50%); one assignment (2000 words) (50%). This unit is a hurdle requirement for graduation.

**Additional Statements**

Workshops have a hurdle requirement of at least 80% attendance.

**HHT4114 EMERGENCY MEDICINE**

**Campus** VU/Gold Coast Institute of TAFE (GCIT)

**Prerequisites** As arranged and negotiated by GCIT and VUT.

**Co-requisites**

**Learning Outcomes**

It is expected that by the end of the unit the student will be able to:

- appreciate the significance, role and limits of TCM knowledge and practice as it relates to specified emergency conditions. analyse and interpret a range of TCM patterns of disharmony, recognise the connection to biomedical patterns and TCM patterns of disharmony, propose and discuss treatment and management approaches specific to a client's condition.

**Content**

The following conditions; acute respiratory failure, asthma, acute cardiac failure, substance abuse, emergency childhood, trauma, burns, pediatric fever, seizures, stroke, cardiovascular accidents, coma, loss of consciousness, head trauma, drowning, acute pain, appendicitis, acute emotional distress, foreign body inhalation and dehydration are identified and explored in detail from a biomedical and TCM perspective. Issues in clinical management of such conditions and referral are explored.

**Recommended Reading**


**Assessment**

13.Assessment: Two assignments weighted at 50%.

Length 1500-2000 words each

**HHT4200 CASE CONFERENCING AND CLINICAL ISSUES 2**

For continuing students only

**Campus** St Albans

**Prerequisites** HHT4103 Chinese Medicine Clinical Internship 1; or equivalent

**Co-requisites** HHT4204 Chinese Medicine Clinical Internship 2; or equivalent

**Learning Outcomes**

On successful completion of this unit, it is expected that students will be able to demonstrate the following learning objectives at a more advanced level than in HHT4100 Case Conferencing and Clinical Issues 1:

1. Apply advanced CM theory and clinical practice theory to cases typically presenting at clinic.
2. Retrieve and evaluate scientific articles and other electronic material applicable to specific and common case presentations in a range of CM clinical specialties;
3. Explain the rationale of diagnoses and treatment selections including point and herb functions in terms of Chinese medicine theory and pathophysiology.
4. Discuss the protocol of the Bian Zheng Lun Zhi method of prescribing treatments;
5. Design and present holistic treatment strategies and plans, incorporating the principles of health preservation, with particular emphasis to an Australian patient base;
6. Communicate case material in a professional style sufficient to facilitate effective handover;
7. Demonstrate advanced practical skills in acupuncture, moxibustion, cupping and ancillary treatment methods;
8. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content**

This unit integrates Chinese medicine theory and practice via interrogation of student case presentations. Case presentations will be determined by the experiences of students when treating clients. The focus will be on commonly seen cases in the Chinese medicine clinical specialties. The unit reinforces aspects of aseptic procedures; history taking; principles of diagnosis; treatment protocols; herb and point functions; dosages; a range of treatment skills; legal issues; and interpersonal and professional communication skills.

**Required Reading**


**Assessment**

Two assignments weighted at 50%.

Length 1500-2000 words each

**HHT4203 CONFERENCING AND CLINICAL ISSUES 3**

For continuing students only

**Campus** St Albans

**Prerequisites** HHT4103 Chinese Medicine Clinical Internship 1; or equivalent

**Co-requisites** HHT4204 Chinese Medicine Clinical Internship 2; or equivalent

**Learning Outcomes**

On successful completion of this unit, it is expected that students will be able to demonstrate the following learning objectives at a more advanced level than in HHT4100 Case Conferencing and Clinical Issues 1:

1. Apply advanced CM theory and clinical practice theory to cases typically presenting at clinic.
2. Retrieve and evaluate scientific articles and other electronic material applicable to specific and common case presentations in a range of CM clinical specialties;
3. Explain the rationale of diagnoses and treatment selections including point and herb functions in terms of Chinese medicine theory and pathophysiology.
4. Discuss the protocol of the Bian Zheng Lun Zhi method of prescribing treatments;
5. Design and present holistic treatment strategies and plans, incorporating the principles of health preservation, with particular emphasis to an Australian patient base;
6. Communicate case material in a professional style sufficient to facilitate effective handover;
7. Demonstrate advanced practical skills in acupuncture, moxibustion, cupping and ancillary treatment methods;
8. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content**

This unit integrates Chinese medicine theory and practice via interrogation of student case presentations. Case presentations will be determined by the experiences of students when treating clients. The focus will be on commonly seen cases in the Chinese medicine clinical specialties. The unit reinforces aspects of aseptic procedures; history taking; principles of diagnosis; treatment protocols; herb and point functions; dosages; a range of treatment skills; legal issues; and interpersonal and professional communication skills.

**Required Reading**


**Assessment**

Two assignments weighted at 50%.

Length 1500-2000 words each

**SCHOOL OF HEALTH SCIENCES**
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


**HHT4203 CHINESE MEDICINE DERMATOLOGY**

**Campus** St Albans

**Prerequisites** HHT3207 Internal Medicine 2; or equivalent.

**Student Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Place in context the history and development of CM dermatology;
2. Discuss the aetiology, pathogenesis, main symptomatology and CM pathophysiology of identified dermatological conditions;
3. Classify dermatological disorders according to broad CM disease categories (syndromes) and describe typical signs and symptoms associated, treatment principle(s) and appropriate treatment with herbal medicine (including main formulae and modifications, purpose of particular herbs), acupuncture and moxibustion;
4. Evaluate dermatological conditions for their suitability for treatment with CM and possible needs to refer to outside health professionals including western medical;
5. Justify with explanations the links between disease and syndrome diagnoses, pathogenesis, treatment principle(s), treatment strategies and appropriate prescriptions (acupuncture and/or herbal medicine);
6. Explain the cautions and contraindications of treatments for the main dermatological conditions (including potential drug-herb interactions, potential adverse reactions associated with treatment and what to do in the event of an adverse reaction);
7. Apply and evaluate treatment principles and strategies in CM dermatology;
8. Evaluate roles for acupuncture, moxibustion, Chinese herbal medicine and other CM approaches in the treatment of dermatological conditions (and identify the most appropriate treatment method(s) for a particular disease);
9. Explain, in professional and lay communication styles, life-style (including diet, personal hygiene) and infection control issues that impact on the management of dermatological conditions;
10. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content** This unit covers the theory and practice of Chinese medicine dermatology. Material includes the traditional and modern classification systems of dermatological disorders; and the general features of physiology, pathology and diagnosis as applied to Chinese medicine dermatology. The aetiology, diagnosis, differentiation and treatment will be examined through detailed studies of common dermatological diseases whilst treatment modalities, including formulating prescriptions of Chinese herbs, selecting points for acupuncture, will be examined through specific clinical cases. Dietary and life-style factors, modes of transmission and infection control from the client's perspective are included.

**Recommended Reading**

**Class Contact** The equivalent of 60 hours per semester comprising lectures and seminars.

**Assessment** One assignment (1500-2000 words) (50%); one final examination (50%). All assessment items address the CGA levels as indicated in the Learning Outcomes.

**Additional Statements** Students should reasonably expect to dedicate additional private contact hours of at least 3 times more than the stipulated class contact hours. Practical sessions and workshops have a hurdle requirement of at least 80% attendance. This unit may be delivered in its entirety in burst mode to allow students the opportunity to undertake their VU-approved final clinical internship.

---

**HHT4201 CHINESE MEDICINE PAEDIATRICS**

**Campus** St Albans

**Prerequisites** HHT3207 Internal Medicine 2; or equivalent.

**Student Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
1. Place in context the history and development of CM paediatrics;
2. Discuss how child development (physical, social and emotional) impacts on paediatric care needs;
3. Explain the pathology of various childhood disorders (including methods of diagnosis, symptomatology and aetiology of main paediatric disorders);
4. Differentiate paediatric disorders including principal symptoms and main syndromes according to Bian Zhong Lun Zhi method in CM;
5. Evaluate paediatric conditions for their suitability for treatment with CM and possible needs to refer to outside health professionals including western medical;
6. Apply and evaluate the general treatments principles in CM paediatrics (explain the relationship between disease mechanism(s) and treatment principle(s) and explain measures for prevention, amelioration and care of paediatric disorders);
7. Identify selected Materia Medica and formulae including modifications relevant to CM paediatrics;
8. Evaluate the roles for different treatment regimes including acupuncture, moxibustion, tui na in CM paediatrics and when referral to other health practitioners including western medicine is necessary;
9. Explain cautions and contraindications associated with treatments used in children (including complications that could occur in a particular disease, possible adverse reactions to herbal formulae, drug-herb interactions, and cautions and potential adverse reactions associated with acupuncture and moxibustion);
10. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

**Content** This unit presents the theory and practice of the CM clinical specialty of paediatrics. Topics include the anatomy and physiology of childhood development, including growth, pathology of various paediatric disorders and care needs associated with childhood development and disease. Particular emphasis is given to the use of Chinese herbs, acupuncture, moxibustion, tui na, dietary management and nursing care for children with disorders. Specific case studies, selected Materia Medica and ethical issues in the child-practitioner relationship are emphasized.

**Required Reading**

**Class Contact** The equivalent of 60 hours per semester comprising lectures, tutorials and student directed learning.

**Assessment** One assignment (1500-2000 words) (30%); one 3-hour examination (70%). This unit is a hurdle requirement for graduation. Additional Statements Students should reasonably expect to devote additional private contact hours of at least 3 times more than the stipulated class contact hours. Practical sessions and workshops have a hurdle requirement of at least 80% attendance. This unit may be delivered in its entirety in burst mode to allow students the opportunity to undertake their VU-approved final clinical internship.
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to demonstrate the following learning outcomes at a professional practitioner level:

1. Demonstrate independence and advanced skills in complete patient management and care;
2. Use advanced acupuncture and Chinese medicine theory;
3. Demonstrate professional skills, attitude and presentation; 4. Reflect on their experience of the consultation process (including diagnosis, treatment approaches and communication skills)
5. Conduct a comprehensive Chinese medical assessment including procedures to minimise patient distress, embarrassment or risk of injury, propose a diagnosis and treatment strategy;
6. Demonstrate understanding of the indications for and skilful use of relevant clinical diagnostic equipment and interpretation of commonly used western diagnostic tests (and describe how results of western diagnostic tests may influence CM diagnosis and treatment strategies);
7. Obtain feedback from clients and explain to the client the clinical significance of both negative and positive findings in plain English;
8. Locate and needle accurately and safely acupuncture points and demonstrate an advanced level of needling techniques appropriate to client needs;
9. Demonstrate a professional level of proficiency in use of and understand the indications for a range of therapeutic techniques including moxa, cupping, gua sha, point injection therapy, dermal hammer, laser, ear acupuncture, electric stimulator and Chinese herbal medicine;
10. Demonstrate proficiency in dispensing of a herbal medicine prescription including advice and instructions on preparation and administration of herbal prescriptions and what to do in the event of an adverse reaction;
11. Explain and demonstrate the procedures involved in the management of a herbal dispensary including storage, labelling, inventory control and contamination control;
12. Record casenotes in a professional manner (legible, accurate, orderly) that would satisfy professional guidelines and would withstand legal scrutiny;
13. Assess the patient’s needs for ongoing treatment or referral, plan a treatment strategy accordingly and communicate the course of treatment and any dietary and lifestyle recommendations to the patient in plain English;
14. Liaise and work effectively with clinical educators;
15. Mentor students in the clinic;
16. Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; information management and processing; communication skills; independent and collaborative empowerment; and appropriate social and cultural awareness and responsiveness.

Content This unit consolidates students in their clinical practice as the Intern Practitioner. Students are required to spend time in the School of Health Sciences' Teaching Clinics and other approved clinical settings to gain broad clinical experience in both acupuncture and herbs and be guided by a variety of clinical educators. This unit must be completed before off-shore clinical placements can be approved. Internship Practitioner: The student practitioner is expected to conduct themselves in the professional manner as demonstrated by Practitioner Clinicians, working under the supervision of a qualified Chinese medicine practitioner. Skills required of the intern practitioner: take all casenotes, define diagnosis, herbs and main formulae that could the prescription could be based upon, define treatment principles and where appropriate apply acupuncture. The intern practitioner works independently and assumes full responsibility for the conduct of each consultation, and production of a final prescription. The supervising practitioner is accessed as required. The supervising practitioner must approve prescriptions as suitable and safe to dispense for each client consulted, before the prescription is processed in the dispensary. Internship Mentor: Final year students are to work closely with junior students to assist them in the development of clinical skills. Dispensary supervision: Final year students will spend part of their time as supervisor in the dispensary. This will give the Internship Practitioner the opportunity for junior students and assume responsibility for the running of the practice dispensary. While the supervising practitioner has overall authority, the Internship practitioner must liaise with the supervising practitioner for all financial decisions and must report discipline issues. During the mentorship period the Intern practitoner has the authority to ensure School of Health Sciences Teaching Clinics policies and procedures are followed. Internship observer status: Clinical hours may also be obtained if a student ‘observes’ clinical practice with a recognized Herbalist with a minimum of 10 years clinical practice (15–20 years minimum recommended). The nature of the ‘observation’ will need to extend to internship status for approval to be granted.


Class Contact A minimum of two hundred and sixty-four (264) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

Assessment Exit Exam comprises one final dispensary practical examination (20%) (proficiency standard hurdle requirement); final combined practical and oral consultation examination (50%) (hurdle requirement); supervised placement comprising successful completion of required 264 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (30%) (hurdle requirement). Exit exam to be examined by three registered Chinese medicine practitioners, one being a staff member of Victoria University, the other two being independent practitioners in Chinese medicine. Any failed assessment item will need to be discussed in the first instance with the Clinical Co-ordinator. This unit is a hurdle requirement for graduation.

Additional Statements Clinical sessions have a hurdle requirement of at least 100% attendance.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact

HHU1171 CLINICAL PRACTICUM 1

Course Contact

HHU1171 Clinical Practicum 1 and evidence of satisfactory completion of a ‘First Aid in the Workplace Level 2’ qualification; or equivalents.

Co-requisite(s) HHD1271 Clinical Diagnosis & Management 1; HHO1272 Osteopathic Science 2; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Perform, in a professional, efficient and competent manner, client-based clerical and clinical reception skills, including taking and making appointments by telephone or in person, taking payments for treatments, ensuring the clinic is generally clean and tidy, maintaining patient files, and ensuring various clinic supplies are available;

2. Perform techniques learnt in the osteopathic science and clinical diagnosis units, such as osteopathic palpation or physical examination techniques, under supervision in relevant clinical settings;

3. Conduct preliminary examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;

4. Participate at a rudimentary level in the decision-making associated with patient cases;

5. Discuss accurately and professionally, and reflect on limited aspects of the case (including observations such as patient posture, external markings, as well as the interactions amongst the patient and the treating student and supervisor) during case discussions;

6. Commence recording case information in a legal (legible, accurate, orderly) manner.

Content The development and extension of clinic management skills, observation of treatments and limited client care. Contributions to case discussions. Assistance to more senior students and administrative staff by providing clerical and clinical reception and treatment room support in clinics. This unit requires attendance at University campus clinics, external clinics and field events to observe treatments by senior students and clinicians.


Class Contact Two (2) hours per week or equivalent for one semester comprising twelve (12) hours of clinical placement in at least one direct patient care setting and lectures, tutorials and workshops. Clinical placement has a hurdle requirement of at least 90% attendance.

Assessment Supervised placement comprising successful completion of required twelve (12) clinical hours (pass/fail) (hurdle requirement); six (6) patient observations recorded in the manner outlined in the Clinical manual (minimum 500 words total) (hurdle requirement); one 30-minute multiple choice question (MCQ) test (pass/fail) (hurdle requirement).

HHU1272 CLINICAL PRACTICUM 2

Campus St Albans, City Flinders, Off Campus.

Prerequisites HHU1171 Clinical Practicum 1 and evidence of satisfactory completion of a ‘First Aid in the Workplace Level 2’ qualification; or equivalents.

Co-requisite(s) HHD1271 Clinical Diagnosis & Management 1; HHO1272 Osteopathic Science 2; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Perform, in a professional, efficient and competent manner, client-based clerical and clinical reception skills, including taking and making appointments by telephone or in person, taking payments for treatments, ensuring the clinic is generally clean and tidy, maintaining patient files, and ensuring various clinic supplies are available;

2. Perform techniques learnt in the osteopathic science and clinical diagnosis units, such as osteopathic palpation or physical examination techniques, under supervision in relevant clinical settings;

3. Conduct preliminary examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;

4. Participate at a rudimentary level in the decision-making associated with patient cases;

5. Discuss accurately and professionally, and reflect on limited aspects of the case (including observations such as patient posture, external markings, as well as the interactions amongst the patient and the treating student and supervisor) during case discussions;

6. Commence recording case information in a legal (legible, accurate, orderly) manner.

Content The development and extension of clinic management skills, observation of treatments and limited client care. Contributions to case discussions. Assistance to more senior students and administrative staff by providing clerical and clinical reception and treatment room support in clinics. This unit requires attendance at University campus clinics, external clinics and field events to observe treatments by senior students and clinicians.

School of Health Sciences. (2006). Bachelor of Science – Clinical Sciences clinical manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.


Other useful Web sites include www.academyofosteopathy.org

Class Contact Hours A minimum of twenty-four (24) hours comprising four (4) hours of placement in an approved direct patient care clinical setting twelve (12) hours, tutorials and workshops normally spread across one entire semester (hurdle requirement) and 8 hours of a Level 1 Sports trainers course. Clinical placement has a hurdle requirement of at least 90% attendance.

Assessment Supervised placement comprising successful completion of required four (4) clinical hours (pass/fail) (hurdle requirement); one 20-minute multiple choice question (MCQ) final written examination (pass/fail) (hurdle requirement).

HHU2173 CLINICAL PRACTICUM 3

Campus St Albans, City Flinders, Off Campus

Prerequisites Satisfactory completion of year 1 of the HBOS degree; or equivalent.

Co-requisites HHD2172 Clinical Diagnosis & Management 2; HH20173 Osteopathic Science 3; or equivalents.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Perform, in a professional, efficient and competent manner, client-based clerical and clinical reception skills, including making appointments by telephone or in person, taking payments for treatments, ensuring the clinic is generally clean and tidy, maintaining patient files, and ensuring various clinic supplies are available;

2. Perform techniques learnt in the osteopathic science and clinical diagnosis units, such as osteopathic palpation or physical examination techniques, under supervision in relevant clinical settings;

3. Conduct preliminary examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;

4. Participate at a rudimentary level in the decision-making associated with patient cases;

5. Conduct examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;

6. Participate in an active yet professional manner in the decision-making associated with patient cases;

7. Record case information, including complex case notes under supervision, in a legal (legible, accurate, orderly) manner.

Content The development and extension of clinical management skills, observation of treatments and supervised provision of limited client care. Contributions to case discussions. Assistance to more senior students and administrative staff by providing clerical and clinical reception and treatment room support in clinics. This unit requires attendance at University campus clinics, external clinics and field events to observe treatments by senior students and clinicians.


(hurdle requirement); one 30-minute multiple choice question (MCQ) final written examination (pass/fail) (hurdle requirement).

**HHU3175 CLINICAL PRACTICUM 5**

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** Satisfactory completion of year 2 of the HBOS degree; or equivalent.

**Co-requisites** HHD3174 Clinical Diagnosis & Management 4; HHO3175 Osteopathic Science 5; or equivalents.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Perform, in a professional, efficient and competent manner, client-based clerical and clinical reception and treatment room support in an approved direct patient care clinical setting normally spread across the operating weeks of the clinic for that semester (hurdle requirement). Clinical placement has a hurdle requirement of at least 90% attendance.

2. Select with a developed aim and perform under supervision in the relevant clinical setting, techniques learnt in the osteopathic science and clinical diagnosis units, such as osteopathic techniques or physical examination techniques;

3. Participate actively and professionally in the decision-making process associated with patient cases;

4. Observe accurately all aspects of the case and take a leading role in the case discussions, on observations such as patient posture, external markings, as well as on the interactions amongst the patient and the treating student and supervisor;

5. Record case information in a legal (legible, accurate, orderly) manner;

6. Write basic patient referral letters and exercise plans.

**Content**

- The development and extension of clinic management skills, observation of treatments and supervised provision of limited clinic care.
- Contributions to and partial leading of case discussions.
- Assistance to more senior students and administrative staff by providing clerical and clinical reception and treatment room support in clinics. This unit requires attendance at University campus clinics, external clinics and field events to observe treatments by senior students and clinicians.


School of Health Sciences. (2006). Bachelor of Science – Clinical Sciences clinical manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.

**Recommended Reading**

- Class Contact A minimum of one hundred and thirty-three (133) hours in an approved direct patient care clinical setting normally spread across the operating weeks of the clinic for that semester (hurdle requirement).

**Assessment**

- Supervised placement comprising successful completion of required (133) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); forty (40) patient observations recorded in the manner outlined in the Clinical manual (minimum 1500 words total) (hurdle requirement); one 30-minute live voice examination (pass/fail) (hurdle requirement); one 30-minute multiple choice question (MCQ) final written examination (pass/fail) (hurdle requirement).

**HHU3276 CLINICAL PRACTICUM 6**

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites**HHD3174 CLINICAL DIAGNOSIS & MANAGEMENT 4; HHO3175 OSTEOPATHIC SCIENCE 5; HHY3174 Pathology 4; HHU3175 Clinical Practicum 5; or equivalents.

**Co-requisites** HHA3275 Anatomy 5; HHO3276 Osteopathic Science 6; or equivalents.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Manage a patient consultation in co-operation with the clinical supervisor, identifying the presenting problem, developing a basic working diagnosis and selecting a treatment regime that considers the presenting problem with some consideration for ethical, practical and pragmatic concerns;

2. Develop a management plan and considering a prognosis that reflects on the patient’s problem generally including some lifestyle factors;

3. Undertake a supervised treatment that utilises the skills developed thus far within a reasonable time and includes the principles of practitionership and utilises the input of supervisors;

4. Include junior students in the information collection, recording and delivery of the treatment;

5. Reflect on the personal and professional limitations seeking advice from supervisors, lecturers, peers, the internet and other sources to assist with the management of a case. This may include discussing co-treatment protocols or specialist referral if appropriate with the supervising clinician;

6. Maintain legal patient histories, write basic referral letters and recognize the need of further referral in conference with Clinical Supervisor and peers;

7. Discuss, showing a high level of understanding, common exercise prescriptions and their use in a case;

8. Discuss, showing a high level of understanding, the sequence of treatment and advise the patient of this.

**Content**

- Attendance at University clinics, external clinics and field clinics to treat patients, discuss and reflect on patient case management under supervision by registered osteopaths.


School of Health Sciences. (2006). Bachelor of Science – Clinical Sciences clinical manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.

**Recommended Reading**

- Class Contact A minimum of one hundred and thirty-three (133) hours in an approved direct patient care clinical setting normally spread across the operating weeks of the clinic for that semester (hurdle requirement).

**Assessment**

- Supervised placement comprising successful completion of required (133) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); forty (40) patient observations recorded in the manner outlined in the Clinical manual (minimum 1500 words total) (hurdle requirement); one 30-minute live voice examination (pass/fail) (hurdle requirement); one 90-minute combined practical and oral examination (OSCE format) (pass/fail) (hurdle requirement).

**HHU4187 CLINICAL PRACTICUM 7**

**Campus** St Albans, City Flinders, Off Campus.

**Prerequisites** HBOS Bachelor of Science – Clinical Sciences; and evidence of satisfactory completion of a current ‘First Aid in the Workplace Level 2 qualification, and a satisfactory police check; or equivalents.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

1. Manage a patient consultation in co-operation with the clinical supervisor, identifying the presenting problem, developing a basic working diagnosis and selecting a treatment regime that considers the presenting problem with some consideration for ethical, practical and pragmatic concerns;

2. Develop a management plan, generally including some lifestyle factors, in co-operation with the Clinical Supervisor and consider a prognosis that reflects on the patient’s problem;

3. Undertake a supervised treatment that uses the skills developed thus far within a reasonable time and includes the principles of practitionership, and utilises the supervisors’ input;

4. Include junior students in the information collection, recording and delivery of the treatment;

5. Reflect on their personal and professional limitations, seeking advice from supervisors, lecturers, peers, the internet, and other sources to assist with the management of a case. This may include discussing co-treatment protocols or specialist referral if appropriate with the supervising clinical supervisor;

6. Maintain legal patient histories, write basic referral letters and recognize the need of further referral in conference with Clinical Supervisor and peers;

7. Discuss, showing a high level of understanding, common exercise prescriptions and their use in a case;

8. Discuss, showing a high level of understanding, the sequence of treatment and advise the patient of this.

**Content**

- Attendance at University clinics, external clinics and field clinics to treat patients, discuss and reflect on patient case management under supervision by registered osteopaths.


School of Health Sciences. (2006). Bachelor of Science – Clinical Sciences clinical manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.

**Recommended Reading**

- Class Contact A minimum of one hundred and thirty-three (133) hours in an approved direct patient care clinical setting normally spread across the operating weeks of the clinic for that semester (hurdle requirement).

**Assessment**

- Supervised placement comprising successful completion of required (133) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); forty (40) patient observations recorded in the manner outlined in the Clinical manual (minimum 1500 words total) (hurdle requirement); one 30-minute live voice examination (pass/fail) (hurdle requirement); one 90-minute combined practical and oral examination (OSCE format) (pass/fail) (hurdle requirement).
Content Supervised clinical practice at the VU St Albans and Flinders Lane clinics and VU-approved external agencies to improve knowledge, skills and attitudes in the diagnosis, treatment and management of patients presenting at clinic. Clinical thought from a holistic perspective is reinforced through case conferencing. Field visits to health care facilities as required. This unit is presented in conjunction with HHO4187 Osteopathic Science 7.7.


HHU4288 CLINICAL PRACTICUM 8
Campus St Albans, City Flinders, Off Campus

Prerequisites HHU4187 Clinical Practicum 7, or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Manage a patient consultation identifying the problem, developing a working diagnosis and selecting a treatment regime that considers the presenting problem in the entirety with consideration for ethical, practical and pragmatic concerns;
2. Develop a management plan and prognosis which sets short, medium and long term goals, and takes into account all aspects of the patient’s problem including lifestyle factors;
3. Undertake a supervised treatment that uses the wide variety of skills developed thus far within a reasonable time, and includes the principles of practitionership and the basics of running a practice;
4. Mentor junior students and include these students in the treatment planning, assessment and delivery of the treatment;
5. Acknowledge their personal and professional limitations seeking advice from supervisors, lecturers, the internet and other sources to assist with the management of a case. This may include co-treatment protocols or special referral if appropriate;
6. Maintain legal (accurate, clear and legible) patient histories; write clear and accurate referral letters, requests for special examinations and basic medicolegal reports;
7. Incorporate evidence in clinical practice including evidence-based clinical practice guidelines and the use of evidence in clinical decision-making;
8. Discuss rehabilitative exercise programs for the most common conditions, including strapping and taping techniques for sports injuries, and common orthopaedic surgical procedures and likely after-effects.

Content Supervised clinical practice at the VU St Albans and Flinders Lane clinics and VU-approved external agencies to improve knowledge, skills and attitudes in the diagnosis, treatment and management of patients presenting at clinic. Clinical thought from a holistic perspective is reinforced through case conferencing. Field visits to health care facilities as required. This unit is presented in conjunction with HHO4288 Osteopathic Science 8.

HHU5189 CLINICAL PRACTICUM 9
Campus St Albans, City Flinders, Off Campus

Prerequisites HHU4288 Clinical Practicum 8; and evidence of satisfactory completion of a current ‘First Aid in the Workplace Level 2’ qualification, and a satisfactory police check; or equivalents.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Manage a patient consultation identifying the problem, developing a working diagnosis and selecting a treatment regime that considers the presenting problem in the entirety with consideration for ethical, practical and pragmatic concerns;
2. Develop a management plan and prognosis which sets short, medium and long term goals, and takes into account all aspects of the patient’s problem including lifestyle factors;
3. Undertake a supervised treatment that uses the wide variety of skills developed thus far within a reasonable time, and includes the principles of practitionership and the basics of running a practice;
4. Mentor junior students and include these students in the treatment planning, assessment and delivery of the treatment;
5. Reflect on the personal and professional limitations seeking advice from supervisors, lecturers, the internet and other sources to assist with the management of a case. This may include co-treatment protocols or specialist referral if appropriate;
6. Maintain legal (accurate, clear, legible) patient histories; write clear and accurate referral letters, requests for special examinations and basic medicolegal reports;
7. Evaluate and use evidence in clinical practice including evidence-based practice, evidence to support clinical decision making and justify the use of evidence in contemporary practice;
8. Apply exercise programs for most common conditions, strapping and taping techniques for sports injuries, common orthopaedic surgical procedures and likely after-effects.

Content Supervised clinical practice at the VU St Albans and Flinders Lane clinics and VU-approved external agencies to improve knowledge, skills and attitudes in the diagnosis, treatment and management of patients presenting at clinic. Clinical thought from a holistic perspective is reinforced through case conferencing with written and oral presentations to peers. Advanced skills in dealing with difficult and problematic cases, and advanced investigative skills (radiological, medical) are also included. Field visits to health care facilities as required.
Faculties of Health, Engineering and Science


School of Health Sciences. (2006). Master of Health Science – Osteopathy clinical manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit. Electronic media

For information on the conditions for osteopaths and other health professionals who provide treatment to veterans and charge the Department of Veterans Affairs (DVA), visit the DVA Web site, http://www.dva.gov.au

For information on workplace injuries, visit the Workcover Web site, http://www.workcover.vic.gov.au

For information on resources for providers of health services to patients covered by Transport Accident Corporation (TCA), visit the TAC Web site, http://www.tac.vic.gov.au/jsp/content/

For information on workplace injuries, visit the Workcover Web site, http://www.workcover.vic.gov.au


Class Contact A minimum of two hundred and nineteen (219) hours in an approved direct patient care clinical setting normally spread across the operating weeks of the clinic for that semester (hurdle requirement).

Clinical placement has a hurdle requirement of at least 90% attendance.

Assessment Supervised placement comprising successful completion of required (219) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); completion including documentation of eighty-five (85) clinical consultations recorded in the Clinical manual (pass/fail) (hurdle requirement); reflective learning tasks as outlined in the Clinical manual (hurdle requirement).

HHU5280 CLINICAL PRACTICUM 10

Campus St Albans, City Flinders, Off Campus

Prerequisites HHU5189 Clinical Practicum 9; or equivalent

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

1. Competently demonstrate a full range of osteopathic techniques;
2. Competently demonstrate a wide range of clinical and patient management skills;
3. Take primary responsibility for patient care from the earliest stage of their practice careers;
4. Devise integrated case management plans for patients, incorporating preventive care strategies;
5. Communicate effectively with other health and legal professionals, both verbally and in writing;
6. Explain the business skills required to run an osteopathic practice.

In particular, students should display the following skills:

1. Manage a patient consultation identifying the problem, developing a working diagnosis and selecting a treatment regime that considers the patient's presenting problem in the entirety with consideration for ethical, practical and pragmatic concerns;
2. Develop a management plan and prognosis that sets short, medium and long term goals, and takes into account all aspects of the patient's problem including lifestyle factors;
3. Take primary responsibility for patient care from the earliest stage of their practice careers;
4. Devise integrated case management plans for patients, incorporating preventive care strategies;
5. Communicate effectively with other health and legal professionals, both verbally and in writing;
6. Explain the business skills required to run an osteopathic practice.

On successful completion of this unit, it is expected that students will be able to:

1. Accurately use the vocabulary of basic pathology;
2. Describe how cells respond to stress;
3. Explain the macroscopic manifestations of acute and chronic inflammation in terms of the microscopic events occurring in the tissues including cellular, vascular, and biochemical events;
4. Describe the long-term effects of chronic inflammation on affected tissues;
5. Describe the basic cellular events occurring during the repair of skin trauma;
6. Explain the pathogenesis and describe the key features of the basic types of hypersensitivity;
7. Recognise the pathological processes that can cause ischaemia and thrombosis, and discuss the complications of ischaemia and thrombosis;
8. Describe the pathophysiological mechanisms of circulatory failure, including shock;
9. Describe the factors involved in the development of infectious disease both from the perspectives of the pathogen and from the host;
10. Describe the defining features of malignant and benign neoplasia, at both macroscopic and microscopic levels;
11. Describe the types of oedema and discuss the pathophysiological mechanisms underpinning each type.
Content
Content will include an introduction to cell injury; acute and chronic inflammation; mechanisms of tissue repair; immunology; abnormalities of blood supply including ischemia, thrombosis, DIC, circulatory failure and atherosclerosis; infection; neoplasia and oedema.

Required Reading
Kiatos, J. (2006). HHY1271 Pathology 1 unit manual. Melbourne, Australia: Victoria University, School of Health Sciences, Osteopathy Unit.

Recommended Reading

Class Contact
Hours Two (2) hours per week or equivalent for one semester comprising lectures and tutorials.

Assessment
One 45-minute written test (20%); one 2-hour final written examination (80%).

HHY2172 PATHOLOGY 2
Campus City Flinders, Off Campus.
Prerequisites HHY1271 Pathology 1; or equivalent.
Co-requisites HHD2172 Clinical Diagnosis & Management 2
Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Explain the pathological processes and describe their manifestations in the haematological, cardiovascular, renal and urogenital systems;
2. Discuss the development of the pathological process through dysfunction to disease in the haematological, cardiovascular, renal and urogenital systems;
3. Discuss the causes or risk factors associated with common and serious haematological, cardiovascular, renal and urogenital diseases, and describe how those causes or risk factors are determined;
4. Describe the clinical presentations of common and serious haematological, cardiovascular, renal and urogenital diseases, including those diseases notable in Australia;
5. Explain the allopathic medical approach to diagnosis, prognosis and principles of management, and the evidential basis for this approach;
6. Distinguish amongst common life-threatening haematological, cardiovascular, renal and urogenital conditions, including recognising problems that require referral to other health care practitioners;
7. Offer preventative health advice about common life-threatening orthopaedic and rheumatology conditions, including recognising problems that require referral to other health care practitioners.

Required Reading
Lecture notes provided by the lecturer.

Recommended Reading

Class Contact
Three (3) hours per week or equivalent for one semester comprising lectures and tutorials.

Assessment
Weekly tutorial questions (total 20%); one 2-hour final written examination (80%).

HHY2273 PATHOLOGY 3
Campus St Albans, City Flinders. Off Campus.
Prerequisites HHD2172 Clinical Diagnosis & Management 2; HHY2172 Pathology 2; or equivalent.
Co-requisites HHD2273 Clinical Diagnosis & Management 3; HHP2273 Physiology 3; or equivalents.
Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
1. Explain with confidence the manifestations and causes of common and serious respiratory, gastrointestinal and endocrine diseases;
Assessment One 45-minute written test (20%); one 2-hour written examination (80%).

HHY4285 PATHOLOGY 5
Campus St Albans, City Flinders, Off Campus.
Prerequisites HBOS Bachelor of Science – Clinical Sciences; or equivalent.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Use an expanded their vocabulary in the area of pathology;
2. Explain the aetiology, pathological stages, clinical picture, complications, and diagnosis of neurological diseases affecting the CNS and PNS;
3. Discuss the basic treatments for neurological diseases affecting the CNS and PNS, and how those treatments might impact on the practising osteopath;
4. Give a brief epidemiological profile of the CNS and PNS diseases, and especially any profiles relevant to the population in Australia.
Content Introduction to aetiology, clinical presentation, diagnosis, treatments and epidemiology of conditions affecting the central and peripheral nervous systems: intracranial space occupying lesions; primary tumours of the CNS; cerebrovascular disease; CNS infections; demyelinating diseases of the CNS: multiple sclerosis; degenerative conditions of the CNS: Alzheimer's disease; Parkinson's disease; motor neuron disease; epilepsy; peripheral neuropathy polynervopathy; myasthenia gravis; fibromyalgia.
Class Contact Twenty-four (24) hours or equivalent normally spread over one semester comprising lectures, tutorials and workshops.
Assessment One 45-minute mid-semester test (20%); one 2-hour written examination (80%).
Below are details of courses offered by the School of Molecular Sciences in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to International students are marked with the (I) symbol.

**BACHELOR OF SCIENCE IN BIOTECHNOLOGY (I)**

**Course Code:** SBBY

**Course Objectives**
The biotechnology degree prepares students for exciting careers in cutting edge science. This program provides in depth education in many areas of modern biology including: genetic engineering, medical research, cloning, forensics, environmental biotechnology, microbiology and biochemistry. There is a strong emphasis on the development of laboratory-based skills for which the school is equipped with state-of-the-art facilities.

**Admission Requirements**
The minimum entry requirement for persons under 21 years of age on 1 January 2006 is the satisfactory completion of a Year 12 course of study approved by the Victorian Curriculum and assessment Board (VCAB), or an equivalent program approved by Victoria University for entry. Prerequisites are Units 3 and 4 in the following subjects: English, and Mathematics (any). There is also provision for mature age entry and entry as a disadvantaged person. Mature age provisions apply to those persons aged 21 and over as at 1 January for the year in which they are applying. Entry into the degree can also be attained through TAFE articulation.

**Course Duration**
The Bachelor of Science program requires the equivalent of three years full-time study.

**Course Structure**

<table>
<thead>
<tr>
<th>Year</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACE1913 PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF1310 BIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF1320 BIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1601 CHEMISTRY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1602 CHEMISTRY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS1000 BIOTECHNOLOGY PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>RBF2300 MICROBIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF2310 MICROBIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF2330 CELL BIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF2390 MOLECULAR GENETICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF2520 BIOCHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBF2530 BIOCHEMISTRY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective (Semester One)1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective (semester 2)2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>RMS3010 BIOPROCESSING APPLICATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3020 GENOMICS, PROTEOMICS AND BIOINFORMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3030 GENETIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3000 BIOPROCESSING TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3050 ADVANCED MEDICAL MICROBIOLOGY</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3060 MICROBIAL TECHNOLOGY AND CELL CULTURE</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3040 PROJECT 1 – BIOTECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS3045 PROJECT 2 – BIOTECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RBM3720 IMMUNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Course**

1. The second year electives can be units chosen from any course within the university subject to the approval of the course co-ordinator.
2. The two six credit point units will both be taken in semester 2.

**BACHELOR OF APPLIED SCIENCE IN CHEMISTRY**

**Course Code:** SBCP

**Course Objectives**
This course provides a sound background in the fundamentals of chemistry and leads to a professional qualification which meets the membership requirements of the Royal Australian Chemical Institute. The course has major emphasis on analytical and organic chemistry and includes significant studies in other areas.

**Course Duration**
This course is specifically designed for part-time study by students employed in chemical and related industries. The course recognises that students in employment develop a wide range of on-the-job skills and consequently it only includes a limited number of subjects in areas other than chemistry. The course is organised to enable completion in six years but may be completed in a shorter time if work commitments permit. Employment in a chemical or related industry for a minimum of three years is a co-requisite and is required for graduation.

**Admission Requirements**
Applicants should have successfully completed VCE or another Year 12 qualification with studies in English and Mathematics. Applicants with other qualifications should seek advice from the Faculty of Health, Engineering and Science. An aptitude for science should be evident. Potential students for the Bachelor of Applied Science in Chemistry should apply directly to the University.
Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester One</th>
<th></th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ace1913</td>
<td>Professional Communication</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td></td>
<td>RCS1008</td>
<td>Industrial Experience 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS1601</td>
<td>Chemistry 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RMA1110</td>
<td>Mathematics for the Biological and Chemical Sciences 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS1000</td>
<td>Medical, Forensic and Analytical Chemistry 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS1008</td>
<td>Industrial Experience 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS1602</td>
<td>Chemistry 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RMA1120</td>
<td>Statistics for the Biological and Chemical Sciences 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2000</td>
<td>Industrial Experience 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2100</td>
<td>Organic Chemistry 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2601</td>
<td>Analytical Chemistry 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2000</td>
<td>Industrial Experience 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2200</td>
<td>Organic Chemistry 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RCS2602</td>
<td>Analytical Chemistry 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>RMA2120</td>
<td>Mathematics for the Biological and Chemical Sciences 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>Semester One</th>
<th></th>
<th></th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS2000</td>
<td>Industrial Experience 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RCS2100</td>
<td>Organic Chemistry 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RCS2601</td>
<td>Analytical Chemistry 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>

Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Description</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ace3010</td>
<td>Written and Oral Communication 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3000</td>
<td>Industrial Experience 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3601</td>
<td>Analytical Chemistry 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3603</td>
<td>Medical Chemistry 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA3071</td>
<td>Introduction to Computer Utilisation</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
<tr>
<td>Ace3010</td>
<td>Written and Oral Communication 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3000</td>
<td>Industrial Experience 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3602</td>
<td>Analytical Chemistry 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
</tr>
<tr>
<td>RCS3608</td>
<td>Polymer Technology</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
</tr>
</tbody>
</table>

Electives to 12 credit points in Year 2, Semester 1.

BACHELOR OF SCIENCE IN MEDICAL, FORENSIC AND ANALYTICAL CHEMISTRY

Course Code: SBMF

Course Objectives

The course provides theoretical and practical training in medical, forensic and analytical chemistry. The design of the course has taken account of recent market research indicating that employers seek graduates with specific skills in analytical chemistry as applied to industrial, medical and forensic issues. Concomitant studies in Molecular Sciences, Biosciences, Communication, Mathematics and Computer Literacy give the graduate the employment skills that support the technical expertise.

The course is designed to meet the professional membership requirements of The Royal Australian Chemical Institute (RACI).

The course comprises with a typical first year that exposes the student to a wide range of science disciplines. Second and third year have a core of subjects offering advanced studies in medical chemistry, forensic chemistry, analytical chemistry and organic chemistry. A number of molecular biology electives are available in second and third year for those students wishing to obtain expertise in this area and related medical and forensic fields or progress to further studies in molecular biology. In the final year chemical knowledge and applications are consolidated through appropriate choices of subjects and electives.

Admission Requirements

Admission will be based upon completion of VCE or equivalent Year 12 qualification. Prerequisites are Units 3 and 4 in English and Mathematics (any). Thus, in keeping with the intention of the University to operate an open access policy, the absence of prior studies in chemistry in particular, and science in general will not preclude admission to the proposed course. However, applicants who have successfully completed Chemistry and/or Specialist Mathematics and/or Physics will be deemed to have a TER of 3 percentage points higher for each study. Certain subjects passed in other courses at Victoria University or at other Institutions may be considered for advanced standing. Provision will be made for articulation from TAFE science programs with appropriate credit.

Course Duration

The course is offered on a full-time basis over three years or part-time equivalent. This course is also designed to allow mid-year entry.

Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester One</th>
<th></th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ace1913</td>
<td>Professional Communication</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>RCS1601</td>
<td>Chemistry 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RBF1310</td>
<td>Biology 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RMA1110</td>
<td>Mathematics for the Biological and Chemical Sciences 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
<td></td>
</tr>
</tbody>
</table>
Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS1000</td>
<td>MEDICAL, FORENSIC AND ANALYTICAL CHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF1320</td>
<td>BIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1602</td>
<td>CHEMISTRY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA1120</td>
<td>STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Year 2

Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF2520</td>
<td>BIOCHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2502</td>
<td>MEDICAL CHEMISTRY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2100</td>
<td>ORGANIC CHEMISTRY 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2601</td>
<td>ANALYTICAL CHEMISTRY 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS2503</td>
<td>FORENSIC CHEMISTRY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2602</td>
<td>ANALYTICAL CHEMISTRY 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA2120</td>
<td>MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

One of the following two Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS2200</td>
<td>ORGANIC CHEMISTRY 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF2390</td>
<td>MOLECULAR GENETICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Year 3

Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE3010</td>
<td>WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3601</td>
<td>ANALYTICAL CHEMISTRY 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA3071</td>
<td>INTRODUCTION TO COMPUTER UTILISATION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$366</td>
<td>$457</td>
<td>$798</td>
</tr>
</tbody>
</table>

Two of the following three Electives*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS3603</td>
<td>MEDICAL CHEMISTRY 3 A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3605</td>
<td>FORENSIC METHODS 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS3030</td>
<td>GENETIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

*In Year 3 students must do at least one semester of Medical Chemistry 3 and one semester of Forensic Methods 3.

Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE3010</td>
<td>WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$257</td>
<td>$321</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3602</td>
<td>ANALYTICAL CHEMISTRY 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Two of the following Three Electives*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS3604</td>
<td>MEDICAL CHEMISTRY 3 B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3606</td>
<td>FORENSIC METHODS 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS3020</td>
<td>GENOMICS, PROTEOMICS AND BIOINFORMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

One of the following Two Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS3607</td>
<td>ADVANCED ANALYTICAL ANALYSES</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
</tr>
<tr>
<td>RCS3608</td>
<td>POLYMER TECHNOLOGY</td>
<td>6</td>
<td>0.0630</td>
<td>3</td>
<td>$428</td>
<td>$535</td>
<td>$1,050</td>
</tr>
</tbody>
</table>

*In Year 3 students must do at least one semester of Medical Chemistry 3 and one semester of Forensic Methods 3.

BACHELOR OF SCIENCE IN NUTRITION, FOOD AND HEALTH SCIENCE

Course Code: SBNH

Course Objectives
The Nutrition, Food and Health Science degree is designed to develop the knowledge and skills in the science of food, its safety and quality as required by today's nutritionists and food scientists. Increasing consumer awareness and demands in regard to food related health issues and the increasingly important role of nutrition in the development and evaluation of food products has generated a rapidly growing need for graduates with a good understanding of both food manufacturing nutrition and health. The course has been specifically designed to meet the demand for such graduates.

Admission Requirements
The minimum entry requirement for persons under 21 years of age on 1 January 2001 is the satisfactory completion of a Year 12 course of study approved by the Victorian Curriculum and Assessment Board (VCAB), or an equivalent program approved by Victoria University for entry. Prerequisites for the Nutrition, Food and Health Science course are Units 3 and 4 in English and Mathematics (any). There is also provision for mature age entry and entry as a disadvantaged person. Mature age provisions apply to those persons aged 21 and over as at 1 January for the year in which they are applying. Certain subjects passed in other courses at Victoria University or at other Institutions may be considered for advanced standing. Provision will be made for articulation from TAFE science programs with appropriate credit.

Course Duration
The Bachelor of Science program requires the equivalent of three years full-time study.

Year 1

Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACE1913</td>
<td>PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBF1310</td>
<td>BIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1601</td>
<td>CHEMISTRY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF1140</td>
<td>INTRODUCTION TO FOOD, NUTRITION AND HEALTH 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
Semester Two
RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2 12 0.1250 2 $726 $908 $1,584
RBF1320 BIOLOGY 2 12 0.1250 2 $726 $908 $1,584
RCS1602 CHEMISTRY 1B 12 0.1250 2 $726 $908 $1,584
RBF1145 INTRODUCTION TO FOOD, NUTRITION AND HEALTH 2 12 0.1250 2 $726 $908 $1,584

Year 2 Semester One
RBF2410 FOOD COMPONENTS 12 0.1250 2 $726 $908 $1,584
RBF2210 NUTRITION AND FOOD ANALYSIS 1 12 0.1250 2 $726 $908 $1,584
RBF2520 BIOCHEMISTRY 1 12 0.1250 2 $726 $908 $1,584
RBM2750 NUTRITION 12 0.1250 2 $726 $908 $1,584

Semester Two
RBF2740 PRINCIPLES OF FOOD PRESERVATION 12 0.1250 2 $726 $908 $1,584
RBF2215 NUTRITION AND FOOD ANALYSIS LABORATORY-2 12 0.1250 2 $726 $908 $1,584
RBF2218 NUTRITION AND COMMUNITY HEALTH 12 0.1250 2 $726 $908 $1,584
RNH2110 DISEASE AND HEALTH 12 0.1250 2 $726 $908 $1,584

Year 3 Semester One: Core
RBF3230 ANIMAL FOOD PROCESSING 6 0.0630 2 $366 $457 $798
RBF3730 FOOD MICROBIOLOGY 12 0.1250 2 $726 $908 $1,584
RBF3810 NUTRIENT AND DRUG INTERACTION 12 0.1250 2 $726 $908 $1,584
RNH3210 SPECIAL TOPICS IN NUTRITION, FOOD AND HEALTH SCIENCE 6 0.0630 2 $366 $457 $798
RBF3350 FOOD SAFETY AND QUALITY 0 0.0000 0 $0 $0 $0

Semester Two: Core
RBF3235 PLANT FOOD PROCESSING 6 0.0630 2 $366 $457 $798
RBF3240 FUNCTIONAL FOODS 12 0.1250 2 $726 $908 $1,584
RBM3960 NUTRITIONAL FRONTIERS 12 0.1250 2 $726 $908 $1,584
RBF3900 PROJECT 12 0.1250 2 $726 $908 $1,584
RBF3255 PRODUCT DEVELOPMENT 6 0.0630 2 $366 $457 $798

Specific Course

Professional Recognition
The Food Science and Technology specialisation has been accredited by the Australian Institute of Food Science and Technology and graduates in this specialisation will be eligible for membership.

GRADUATE DIPLOMA IN BIOTECHNOLOGY

Course Code: SGBT

Course Objectives
The Graduate Diploma in Biotechnology is designed to provide students with skills, knowledge and expertise in the field of Biotechnology and related areas. The specific aims of the course are to provide students with:
(a) A sound knowledge at an advanced level of the scientific principles underlying the basis of the biotechnology industry and research in the area.
(b) Problem solving skills
(c) The skills to use and locate information on problems relating to biotechnology from textbooks, scientific journals and the Internet.
(d) Excellent oral and written communication skills including discussions on various topics related to the biotechnology field.

Admission Requirements
Applications will be considered from graduates who have completed an undergraduate degree, comprising the equivalent of at least three years full-time study in an approved area of study. Eligible areas include Biology, Chemistry, Biochemistry, Biomedical Sciences, Veterinary Science, MBBS and other related fields. Academic performance in the undergraduate degree will be required to be, on average, at credit level or higher. A substantial amount of laboratory work will be required to have been completed in the undergraduate degree so that students are already proficient in basic biological, microbiological and chemical laboratory techniques. In addition, there will be the normal requirement for a minimum score of 6.5 in the IELTS English language test (exceptions may be made by the Faculty).

Course Duration
The duration of the course is one year full-time with the option of a part-time equivalent.

Course Structure
The Graduate Diploma in Biotechnology is a nested award within the Master of Science – Biotechnology (Biotechnology and Bioinformatics Streams) and requires completion of the units in the first year of the Masters course. This requires completion of the 6 core units in Group A and 2 electives from Groups B or C listed below, to a total of 96 credit points. After completion of this year, students can elect to study one more year and complete the MSc – Biotechnology (SMBT).

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee
(AUS) (AUS) (AUS)

(Group A, Core Units)
RMS5110 MOLECULAR GENETICS THEORY 12 0.1250 2 $726 $908 $1,584
RMS5120 APPLIED GENETIC ENGINEERING 12 0.1250 2 $726 $908 $1,584
RMS5140 BIOPROCESSING TECHNOLOGY PRINCIPLES 12 0.1250 2 $726 $908 $1,584
RMS5145 BIOPROCESSING TECHNOLOGY APPLICATIONS 12 0.1250 2 $726 $908 $1,584
RMS5130 FUNCTIONAL GENOMICS & BIOINFORMATICS THEORY 12 0.1250 2 $726 $908 $1,584
RMS5135 FUNCTIONAL GENOMICS & BIOINFORMATICS APPLICATIONS 12 0.1250 2 $726 $908 $1,584

Examples of Elective Units
(Group B)
RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOG 12 0.1250 2 $726 $908 $1,584
RMS5150 ETHICS AND REGULATORY AFFAIRS IN BIOTECHNOLOGY 12 0.1250 2 $726 $908 $1,584
RMS6130 BIOINFORMATICS I 12 0.1250 2 $726 $908 $1,584
### Graduate Diploma in Environmental Management

**Course Code:** SGEM

**Course not offered in 2008**

**Course Objectives**

The course is aimed at producing graduates with a good understanding of contemporary environmental problems and solutions. A mixture of coursework will be provided including solid waste management, water pollution control and environmental law.

**Course Duration**

The course will be offered in full-time and part-time modes.

**Admission Requirements**

The normal entry requirement is a relevant degree or diploma, but special admission may be granted for applicants without the required qualifications but with a number of years of relevant industrial experience.

**Course Structure**

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS5111 PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCS5121 ENVIRONMENTAL LAW AND STANDARDS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCS5131 WATER POLLUTION MONITORING &amp; LIQUID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
<tr>
<td>RCS5172 SOLID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
</tr>
</tbody>
</table>

**Assessment**

Assessment will consist of assignments, field reports, class presentations and end-of-semester examinations.

### Graduate Diploma in Food Science (Exit Point for the Master of Science in Food Science(SMFO))

**Course Code:** SGFO

**Course Objectives**

The course is designed to provide professional training in food science and technology for graduates in science, applied science, engineering, agricultural and other related disciplines who may or may not have had previous formal training in this area.

The course seeks to equip graduates with the necessary knowledge and skills required to operate effectively in the food industry at various management levels. The course is designed not only to train recent graduates as food technologists, but also to enable those already employed in the food and associated industries to enhance their professional status.

**Admission Requirements**

To qualify for admission to the course an applicant must have satisfactorily completed a four year science based undergraduate degree, or a science based honours degree, or a three year science based undergraduate degree plus relevant employment experience.

Applicants who do not meet these qualifications may be admitted after the completion of an approved course of pre-study, or on submission of such other evidence of academic, professional or vocational attainment to indicate that the applicant possesses the educational preparation and capacity to pursue the course.

**Course Duration**

The course requires the successful completion of a program of core and elective subjects, totalling a minimum of 96 credit points. Subject to demand, the course is offered on a one-year full-time basis or equivalent part time. The Graduate Diploma in Food Science is an exit point from the Master of Science (Food Science).
Course Structure

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF6750</td>
<td>FOOD SAFETY AND QUALITY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RBF6720</td>
<td>MICROBIOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6730</td>
<td>PRESERVATION AND</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RCM6760</td>
<td>PROCESSING TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RBF6760</td>
<td>CHEMISTRY OF FOODS</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>Commodity</td>
<td>electives – 16 credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>points selection from</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6721</td>
<td>FRUIT AND VEGETABLE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RBF6722</td>
<td>SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RBF6723</td>
<td>MUSCLE FOOD SCIENCE AND</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
<tr>
<td>RBF6724</td>
<td>TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
</tr>
</tbody>
</table>

BACHELOR OF SCIENCE (HONOURS) BIOLOGY (BIOTECHNOLOGY)

Course Code: SHBB

Course Objectives
An Honours program is available in each of the degree specialisations. The aim of the honours program is to provide a course of advanced study at a fourth year level which builds on the knowledge and skills developed at degree level, and to prepare students for postgraduate research by developing skills in: working independently, critical analysis of information, problem-solving, devising, designing and conducting experimental work and written and oral communication

Admission Requirements
To qualify for entry to the honours program, applicants must hold a degree or equivalent with major studies in a relevant discipline and should normally have obtained a 'credit' average, or equivalent, in the final year of the degree.

Course Duration
The courses are offered on a full-time basis over one year or equivalent if on a part-time basis. Entry to the Honours program for the Conservation Biology and Environmental Management specialisation can be either at the beginning of the academic year (February) or at a mid-year intake (July) to allow for field-based research with seasonal limitations.

Course Structure

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS4001</td>
<td>HONOURS COURSEWORK</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
</tr>
<tr>
<td>RCS4002</td>
<td>SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
</tr>
</tbody>
</table>

Other Course Specific Notes
The course consists of advanced coursework and a research thesis. Assessment will be based on written assignments, seminar presentations, a written examination and the research thesis.

Coursework assessment will be based on seminar presentations, written assignments and examination.

BACHELOR OF SCIENCE (HONOURS) IN CHEMICAL SCIENCES

Course Code: SHCB

Course Objectives (for SHBT, SHFT and SHCB)
An Honours program is available in each of the degree specialisations. The aim of the honours program is to provide a course of advanced study at a fourth year level which builds on the knowledge and skills developed at degree level, and to prepare students for postgraduate research by developing skills in: working independently, critical analysis of information, problem-solving, devising, designing and conducting experimental work and written and oral communication

Admission Requirements
To qualify for entry to the honours program, applicants must hold a degree or equivalent with major studies in a relevant discipline and should normally have obtained a 'credit' average, or equivalent, in the final year of the degree.

Course Duration
The courses are offered on a full-time basis over one year or equivalent if on a part-time basis. Entry to the Honours program for the Conservation Biology and Environmental Management specialisation can be either at the beginning of the academic year (February) or at a mid-year intake (July) to allow for field-based research with seasonal limitations.

Course Structure

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester 1</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS4201</td>
<td>HONOURS COURSEWORK</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
</tr>
<tr>
<td>RCS4601</td>
<td>PROJECT PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCS4602</td>
<td>HONOURS PROJECT</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
</tr>
<tr>
<td>RCS4610</td>
<td>PROJECT PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
</tr>
</tbody>
</table>

Part Time students enrol in RCS4610 over 2 semesters (24 credit points each semester)

Specific Course
The course consists of advanced coursework and a research thesis. Assessment will be based on written assignments, seminar presentations, a written examination and the research thesis.

Coursework assessment will be based on seminar presentations, written assignments and examination.
BACHELOR OF SCIENCE (HONOURS) (NUTRITION AND FOOD SCIENCES)

Course Code: SHNF

Course Objectives
An Honours program is available in each of the degree specialisations. The aim of the honours program is to provide a course of advanced study at a fourth year level which builds on the knowledge and skills developed at degree level, and to prepare students for postgraduate research by developing skills in: working independently, critical analysis of information, problem-solving, devising, designing and conducting experimental work and written and oral communication.

Admission Requirements
To qualify for entry to the honours program, applicants must hold a degree or equivalent with major studies in a relevant discipline and should normally have obtained a 'credit' average, or equivalent, in the final year of the degree.

Course Duration
The courses are offered on a full-time basis over one year or equivalent if on a part-time basis. Entry to the Honours program for the Conservation Biology and Environmental Management specialisation can be either at the beginning of the academic year (February) or at a mid-year intake (July) to allow for field-based research with seasonal limitations.

Course Structure

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>RBF4001 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Semester 2</td>
<td>RBF4002 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

Specific Course
The course consists of advanced coursework and a research thesis. Assessment will be based on written assignments, seminar presentations, a written examination and the research thesis. Coursework assessment will be based on seminar presentations, written assignments and examination.

MASTER OF SCIENCE – BIOTECHNOLOGY (BIOTECHNOLOGY AND BIOINFORMATICS STREAMS)

Course Code: SMBT

Course Objectives
This Masters program is designed to provide students with skills, knowledge and expertise in the field of Biotechnology and related areas. The specific aims of the course are to provide students with:

(a) A sound knowledge at an advanced level of the scientific principles underlying the basis of the biotechnology industry and research in the area.
(b) Problem solving skills.
(c) The skills to use and locate information on problems relating to biotechnology from textbooks, scientific journals and reliable sources on the Internet.
(d) Excellent oral and written communication skills including discussions on various topics related to the biotechnology field.
(e) An opportunity to further develop their skills and knowledge in the biotechnology, bioinformatics, computing, business and law areas, depending on electives chosen in the second stage of the course.

Course Duration
The duration of the course is two years full-time with the option of a part-time equivalent.

Admission Requirements
Applications will be considered from graduates who have completed an undergraduate degree, comprising the equivalent of at least three years full-time study in an approved area of study. Eligible areas include Biology, Chemistry, Biochemistry, Biomedical Sciences, Veterinary Science, MBBS and other related fields. Academic performance in the undergraduate degree will be required to be, on average, at credit level or higher. A substantial amount of laboratory work will be required to have been completed in the undergraduate degree so that students are already proficient in basic biological, microbiological and chemical laboratory techniques. In addition, there will be the normal requirement for a minimum score of 6.5 in the IELTS English language test (exceptions may be made by the Faculty).

Course Structure
The Master of Biotechnology course consists of two streams, Biotechnology and Bioinformatics, each of which consists of a total of 16 units worth 192 credit points. In the first year of the degree, students in each stream are required to take 6 core units (Group A) and 2 electives from Groups B or C to a total of 96 credit points. In the second year of the degree students in the Biotechnology stream are required to choose two elective units from Group B and others from Groups B or C to a total of 96 credit points. Students in the Bioinformatics stream must take the four core units for this stream listed below and other electives from Group B or C to a total of 96 credit points. Other units from the School of Molecular Sciences or other schools and faculties may also be taken as electives subject to approval by the Course Coordinator.

Note that an exit point (Graduate Diploma in Biotechnology – SGBT) is also available after successful completion of the first year of this course i.e. the 6 core and 2 elective units, completing a total of 96 credit points. This is a nested award within the Master of Science – Biotechnology.

Core Units for Both Streams

<table>
<thead>
<tr>
<th>Core Units for Both Streams</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF4001 MOLECULAR GENETICS THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF4002 APPLIED GENETIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS5140 BIOPROCESSING TECHNOLOGY PRINCIPLES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS5145 BIOPROCESSING TECHNOLOGY APPLICATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS5130 FUNCTIONAL GENOMICS &amp; BIOINFORMATICS THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS5135 FUNCTIONAL GENOMICS &amp; BIOINFORMATICS APPLICATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Core Units for Bioinformatics Stream

<table>
<thead>
<tr>
<th>Core Units for Bioinformatics Stream</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS6130 BIOINFORMATICS I</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5800 OBJECT ORIENTED PROGRAMMING GD1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS5140 BIOPROCESSING TECHNOLOGY PRINCIPLES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6907 STATISTICAL COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
### Examples of Elective Units

#### Group B

- **RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOGY**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RMS5150 ETHICS AND REGULATORY AFFAIRS IN BIOTECHNOLOGY**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RMS6170 DRUG DESIGN & DEVELOPMENT**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RMS6135 BIOINFORMATICS II**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RCS5100 RESEARCH METHODOLOGY**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584

#### Other Electives

- **RCS5800 OBJECT ORIENTED PROGRAMMING GD1**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RCM6607 STATISTICAL COMPUTING**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RCM5802 INFORMATION SYSTEMS**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RCM5803 DATA STRUCTURES AND PROGRAMMING**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **RCM5602 QUALITY MANAGEMENT AND STATISTICS**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BMO5602 BUSINESS PROJECT MANAGEMENT**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BLO6502 LAW FOR MANAGEMENT**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BEO5304 INTERNATIONAL BUSINESS OPERATIONS**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BLB3129 INTELLECTUAL PROPERTY LAW**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BLB5500 COMPARATIVE LEGAL SYSTEMS**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584
- **BHO5583 MARKETING RESEARCH**: 12 credit points, EFTSL 0.1250, SC Band 2, Pre 2005 $726, From 2005 $908, Full Fee $1,584

### MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT

**Course Code:** SMEM

Course not offered in 2008

**Course Objectives**

The Masters program is designed to enhance the students' range of knowledge in environmental waste management and pollution control, to provide additional skills in research and development and to enable a focusing of practical skills into a specific research area which may be related to the candidates' current employment.

**Admission Requirements**

The normal entry requirement is a four year Bachelor of Science Degree or a three year Bachelor of Science Degree with relevant experience.

**Course Duration and Structure**

The Masters program consists of a coursework component that is equivalent to the Graduate Diploma and a research project component. Both components are available on a part-time basis.

#### Course Structure

<table>
<thead>
<tr>
<th>Session 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS5111 PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5131 WATER POLLUTION MONITORING &amp; LIQUID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5172 SOLID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5121 ENVIRONMENTAL LAW AND STANDARDS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS5141 AIR QUALITY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5192 CLEANER PRODUCTION TECHNOLOGY AND WASTE MINIMISATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5132 ENVIRONMENTAL LAW AND STANDARDS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session 1 and/or 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS6000 PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

**Other Course Specific Notes**

Assessment for the will consist of assignments, field reports, class presentations, end-of-semester examinations and a project report.

### MASTER OF SCIENCE (FOOD SCIENCE) (I)

**Course Code:** SMFO

**Course Objectives**

The course is designed to provide professional training in food science and technology for graduates in science, applied science, engineering, agricultural and other related disciplines who may or may not have had previous formal training in this area.

The course seeks to equip graduates with the necessary knowledge and skills required to operate effectively in the food industry at various management levels. The course is designed not only to train recent graduates as food technologists, but also to enable those already employed in the food and associated industries to enhance their professional status.

**Admission Requirements**

To qualify for admission to the course an applicant must have satisfactorily completed a four year science based undergraduate degree, or a science based honours degree, or a three year science based undergraduate degree plus relevant employment experience.
Applicants who do not meet these qualifications may be admitted after the completion of an approved course of pre-study, or on submission of such other evidence of academic, professional or vocational attainment to indicate that the applicant possesses the educational preparation and capacity to pursue the course.

**Course Duration**
The course requires the successful completion of a program of compulsory and elective subjects, totalling a minimum of 192 credit points. Subject to demand, the course is offered on a full-time basis over two years or equivalent part time.

### Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6720 FOOD MICROBIOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6750 FOOD SAFETY AND QUALITY ASSURANCE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>And One unit of study from Commodity Electives 16 credit points; 6 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6730 PRESERVATION AND PROCESSING TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6760 CHEMISTRY OF FOODS</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>RCM6760 RESEARCH PRACTICE, ETHICS AND COMMUNICATION IN FOOD SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6920 MAJOR PROJECT 1</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6710 FOOD ANALYSIS</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>And One unit of study from Commodity Electives 16 credit points, 6 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6925 MAJOR PROJECT 2</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>And One Unit of Study from General Electives 16 credit points, 6 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>And One Unit of Study from Commodity Electives 16 credit points, 6 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Commodity Electives

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF6721 FRUIT AND VEGETABLE SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6722 GRAIN SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6723 MUSCLE FOOD SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6724 DAIRY SCIENCE AND TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
</tbody>
</table>

### General Electives

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF6910 MINOR PROJECT</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6745 FOOD PRODUCT DEVELOPMENT</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6740 SPECIAL TOPICS IN FOOD TECHNOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
<tr>
<td>RBF6930 INDUSTRY TRAINING</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
</tr>
</tbody>
</table>
SUBJECTS

Below are subject details for courses offered by the School of Molecular Sciences in 2008. IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

RBF1140 INTRODUCTION TO FOOD, NUTRITION AND HEALTH 1
Campus Werribee
Prerequisite(s) Nil
Content Introduction to food industry, its components and organisation, both in Australia and internationally; the composition of foods, food processing and food safety; Introduction to the preservation and processing of fruits and vegetables, grains and oilseeds, dairy products, meat, poultry, fish and beverages.
Required Reading Parker, R., 2003, Introduction to Food Science, Delmar, Thomson Learning Inc. Albany, USA.
Class Contact four hours per week comprising of three hours of lectures and one hour of tutorial/demonstration.
Assessment Assignment (2x2000 words), 40%; Examination (1x3 hrs), 60%.

RBF1145 INTRODUCTION TO FOOD, NUTRITION AND HEALTH 2
Campus St Albans, Werribee.
Prerequisite(s) Nil
Content Principles of nutrition and nutritional aspects of various food commodities and their impact on health.
Required Reading Parker, R., 2003, Introduction to Food Science, Delmar, Thomson Learning Inc. Albany, USA.
Class Contact four hours per week comprising of three h of lectures and one hour of tutorial/demonstration.
Assessment Assignment (2x2000 words), 40%; Examination (1x3 hrs), 60%.

RBF1310 BIOLOGY 1
Campus St Albans, Werribee.
Prerequisite(s) Nil
Content Biology of the cell. Mammalian biology with particular reference to the structure and function of various human physiological systems.
Required Reading Solomon, Berg and Martin Biology., latest edn, Thomson or as advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact Five hours per week for one semester comprising three hours of lectures and two hours of practical work.
Assessment Assignments, 10%; practical work, 30%; final examination, 60%.

RBF1320 BIOLOGY 2
Campus St Albans, Werribee.
Prerequisite(s) Nil
Required Reading Solomon, Berg and Martin Biology., latest edn, Thomson or as advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact Five hours per week for one semester comprising three hours of lectures and two hours of practical work.
Assessment Assignments, 10%; practical work, 30%; final examination, 60%.

RBF2210 NUTRITION AND FOOD ANALYSIS 1
Campus Werribee
Prerequisites RBF 1135 and RBF1140 and RBF1145 Introduction to Food, Nutrition and Health 1 and 2, and RCS1601 Chemistry 1A and RCS 1602 Chemistry 1B or equivalent
Co-requisites Nil
Content To study experimental techniques as applied to nutrition and food studies. Rationale for experimental procedures used in nutrition, experimental design, statistical analysis, anthropometry, feeding trials, N balance studies, amino acid score, digestibility of food, nutritional survey and data collection, dietary instrument design, diet analysis, calorimetry, analysis of specific nutrients, use of analysis software, site visits. Pitfalls and complications encountered in human nutrition experimentation, and strategies commonly used to overcome these. Procedures for analysis of foods using HPLC, GC, UV/Vis, IR.
Class Contact Three hours per week comprising of lecture/tutorial/laboratory and site visits
Assessment Assignments 20%, examination 50%, practical work 30%.

RBF2215 NUTRITION AND FOOD ANALYSIS LABORATORY-2
Campus Werribee
Prerequisite(s) RBF1145 Introduction to Food, Nutrition and Health Science and RCS1601 Chemistry A and RCS1602 Chemistry B or equivalent.
Content Rationale for experimental procedures used in nutrition, experimental design, statistical analysis, anthropometry, feeding trials, N balance studies, amino acid score, digestibility of food, nutritional survey and data collection, dietary instrument design, diet analysis, calorimetry, analysis of specific nutrients, use of analysis software, site visits. Pitfalls and complications encountered in human nutrition experimentation, and strategies commonly used to overcome these.
Class Contact Four h per week, comprising two hours of lecture and two hours of lab
Assessment Assignment (2x2000 words), 20%; Examination (1x3 hrs), 50%; Practical work (6 lab reports), 30%.

RBF2218 NUTRITION AND COMMUNITY HEALTH
Campus Werribee
Prerequisite(s) RBM 2750 Nutrition or equivalent.
Content Importance of community nutrition in public health promotion. Health behavior theories. Food security. Community nutrition throughout the lifespan (breastfeeding promotion; childhood and adolescence; adults and chronic disease prevention; nutrition-related problems in the elderly). Development of effective communication programs. Education and intervention programs in locating public health data and health epidemiology. Cultural competency and International nutrition.
and telomerases, methylation and imprinting of DNA, mutations and rearrangements in the immune system, replication of DNA, telomeres (covering all of the major organelles) and compartmentalisation; systems including genes in early development, genes responsive to eukaryotic genomes including repetitive and nonrepetitive DNA final year of the degree program. Main topics include: organisation of and strengthen the foundations for the unit 'Genetic Engineering' in the

Introduction to developments at the forefront of molecular biology of gene structure and function and molecular genetics. The subject will build on material covered in Biochemistry 1 and Cell Biology and strengthen the foundations for the unit 'Genetic Engineering' in the final year of the degree program. Main topics include: organisation of eukaryotic genomes including repetitive and nonrepetitive DNA sequences, multigene families, pseudogenes; organisation of prokaryotic genomes; genomic rearrangements including transposable genetic elements, retroviruses and other mechanisms, genetic rearrangements in the immune system, replication of DNA, telomerases and telomeras, methylation and imprinting of DNA, mutations and repair mechanisms, regulation of gene expression, specialised genetic systems including genes in early development, genes responsive to hormones and heat shock.

RBF2300 MICROBIOLOGY 1  
Campus Werribee.  
Prerequisite(s) RBF1310 Biology 1.  
Content Introduction to the biology of bacteria, protozoans, fungi and viruses. Microbial cell morphology; structure and function of cell components. Growth, reproduction and enumeration of microorganisms. Control of microbial growth: the effect of physical and chemical environments on growth. Microbial metabolism and genetics.  
Required Reading To be advised by lecturer.  
Class Contact Five hours per week comprising three hours of lectures per week and eight three hour laboratory classes during the semester.  
Assessment Assignment, 20%; practical work, 25%; examination, 55%.

RBF2310 MICROBIOLOGY 2  
Campus Werribee  
Prerequisite(s) RBF2300 Microbiology 1.  
Content This subject aims to build on material covered in RBF2300 Microbiology 1 to further develop the student's knowledge of microbiology. Topics include: introduction to microbial ecology, evolutionary and ecological aspects of interactions between microbes and higher organisms, microbiota associated with selected animals and plants, non-specific host defences in a range of plants and animals, entry of pathogens into a range of plant and animal hosts, pathogenic effects in a range of plant and animal hosts, clinical and diagnostic microbiology, basic principles of public health microbiology.  
Required Reading To be advised by lecturer.  
Class Contact Five hours per week comprising two hours of lectures, two hours of laboratory work and one one-hour tutorial for one semester.  
Assessment Assignment, 20%; practical work, 25%; final examination, 55%.

RBF2330 CELL BIOLOGY  
Campus St Albans, Werribee.  
Prerequisite(s) RBF1310 Biology 1 or RMB1528 Human Physiology 2 or equivalent.  
Content This unit complements units in Biochemistry and provides a strong foundation for students moving into areas such as: biotechnology, molecular biology, medical sciences and environmental sciences. Topics covered include: Eukaryotic cell organisation (covering all of the major organelles) and compartmentalisation; membranes and membrane mechanisms; the cell surface; intracellular targeting of proteins including cotranslational and post translational pathways; transport and dock of vesicles; motor proteins, movement and the cytoskeleton; communication between cells including receptors and signal transduction pathways; cell cycle and its regulation; apoptosis; the molecular basis of cancer.  
Required Reading To be advised by lecturer.  
Class Contact Four hours per week for one semester based on three hours of lectures and one hour of tutorial.  
Assessment Assignments, 40%; examination, 60%.

RBF2390 MOLECULAR GENETICS  
Campus Werribee  
Prerequisites RBF250 Biochemistry 1.  
Content Introduction to developments at the forefront of molecular biology of gene structure and function and molecular genetics. The subject will build on material covered in Biochemistry 1 and Cell Biology and strengthen the foundations for the unit 'Genetic Engineering' in the final year of the degree program. Main topics include: organisation of eukaryotic genomes including repetitive and nonrepetitive DNA sequences, multigene families, pseudogenes; organisation of prokaryotic genomes; genomic rearrangements including transposable genetic elements, retroviruses and other mechanisms, genetic rearrangements in the immune system, replication of DNA, telomerases and telomeras, methylation and imprinting of DNA, mutations and repair mechanisms, regulation of gene expression, specialised genetic systems including genes in early development, genes responsive to hormones and heat shock.

RBF2410 FOOD COMPONENTS  
Campus Werribee  
Prerequisite(s) RBF1140 Introduction to Food, Nutrition and Health Science and RCS1601 Chemistry A and RCS1602 Chemistry B or equivalent.  
Content Food constituents; water; structure, chemistry, stability and functional properties of proteins, carbohydrates, fats and oils, vitamins and minerals. Food colour, texture and flavour. Reactions leading to deterioration of foods: oxidative deterioration and rancidity, anti-oxidants, browning reactions; food additives, natural and synthetic colorants and flavouring agents; gels, colloids, foams and emulsions.  
Class Contact Four hours per week, comprising of three hours of lecture and one hour tutorial.  
Assessment Assignment (2x2000 words), 40%; Examination (1x3 hrs), 60%.

RBF2520 BIOCHEMISTRY 1  
Campus St Albans, Werribee.  
Prerequisite(s) RBF1310 Biology 1 and RCS1601 Chemistry 1A or equivalent.  
Content This subject aims to provide a general introduction to biochemistry and includes: structure and functions of carbohydrates, lipids, proteins and nucleic acids. Biological membranes. Enzymes: kinetics and regulatory enzymes. Metabolism: bioenergetics, glycolysis, citric acid cycle, chemiosmosis, gluconeogenesis, amino acid metabolism, fatty acid metabolism, photosynthesis. DNA: structure, replication, expression, and basic gene cloning.  
Required Reading To be advised by lecturer.  
Class Contact Six hours per week, comprising three hours of lectures, two hours of laboratory, and one hour of tutorial work for one semester.  
Assessment Practical work, 30%; final examination, 55%; assignment/test, 15%.

RBF2530 BIOCHEMISTRY 2  
Campus Werribee  
Prerequisite(s) SBF2520 Biochemistry 1.  
Content The aim of this subject is to expand on material covered in Biochemistry 1, and complement the Molecular Cell Biology and Microbiology subjects. Along with Biochemistry 1, this subject will provide a solid foundation in biochemical principles, reactions and applications. Topics covered include bioenergetics, the pentose phosphate pathway, amino acid and nucleotide metabolism, photosynthesis, assimilates of plant metabolism and biochemistry of neurotransmitters. Other topics covered will include the structure and function of biological molecules, ligand binding and conformational changes, mechanisms of enzyme action, advanced enzyme kinetics, regulation of biochemical systems such as hormonal and transcriptional control. Applied aspects of biochemistry will also be considered.  
Required Reading To be advised by lecturer.  
Class Contact Six hours per week, comprising three hours of lectures, two hours of laboratory work and one hour tutorial for one semester.  
Assessment Assignments, 15%; practical work (including test), 25%; final examination 60%.

RBF2740 PRINCIPLES OF FOOD PRESERVATION  
Campus Werribee  
Prerequisite(s) RBF1140 Introductory Food  
Required Reading To be advised by lecturer.  
Required Reading To be advised by the lecturer.


Class Contact Four hours per week comprising three hours of lectures and one hour of tutorial/demonstration/practical work.

Assessment Assignment (2x2500 words), 30%; Exam (1x three h), 50%; Practical reports/class tests 2/2, 20%.

RBF3255 PRODUCT DEVELOPMENT

Campus Werribee

Prerequisite(s) RBF1140 and RBF1145 Introduction to Food, Nutrition and Health Science-1 and 2.

Content Product idea generation; concept development and testing; Marketing-strategy development, Product and process development process (project planning, formulation development, process development, shelf-life testing); Consumer testing: Market trial methods and estimation of market size; Product specifications (raw materials, process, finished product); Packaging and labelling, product evaluation, product costing and pricing; Production planning; Market development and product launch.


Class Contact Three hours per week comprising two hours of lectures and one hour of tutorial/demonstration/practical work.

Assessment Assignment (1x3000 words), 20%; Exam (1x three h), 50%; Practical reports/class tests 2, 30%.

RBF3730 FOOD MICROBIOLOGY

Campus Werribee

Prerequisite(s) Nil. 1.

Content This subject is under development; and increase the student's knowledge and skills in microbiology with particular reference to the role of micro-organisms in food processing, food spoilage and food-borne disease. Topics include: characteristics of major groups of micro-organisms of importance in foods; ecology of food spoilage. Microbial growth in foods; microbial fermentation and fermented products; biomass; waste treatment; food-borne infections and food poisoning; control and prevention of food-borne disease; hygiene and sanitation; mycotoxins; legislation and standards will be covered.


Class Contact Six hours per week for one semester comprising lectures, tutorials and practical work.

Assessment Assignments, 15%; practical work, 25%; final examination, 60%.

RBF3810 NUTRIENT AND DRUG INTERACTION

Campus Werribee

Prerequisite(s) RBF 2550 Nutrition, SBM 2260 Diet and Nutrition or equivalent, SNH2110 Disease and Health.

Content The aim is to study metabolic fate of drugs and nutrient and drug interactions. Metabolic fates of drugs and xenobiotics, known drug-nutrient interactions, role of nutrient-drug interactions in the development of nutritional imbalance. Pharmacodynamics. Major classes of prescription drugs and their indications, and their effects on gastrointestinal and metabolic function. Role of nutrient-drug interactions in the aetiology and treatment of significant disease conditions. Impact of hepatic and renal insufficiency on drug and nutrient bioavailability.

RBF4001 SCIENCE HONOURS
Campus Werribee
Prerequisites Satisfactory completion of an undergraduate degree program with a credit average in the final year.
Co-requisites
Content The program will consist of a research project and a coursework component. The major focus of the course component is research methodology and subjects include experimental design, statistics in research, data analysis, computer applications and software, literature analysis and critical appraisal, ethics in research, scientific writing and data presentation. The research project will be undertaken in one of the research areas of the School and may, subject to approval, be undertaken at an external location. Required Reading To be advised by the lecturer.
Recommended Reading
Class Contact An average of 20 hours per week for one semester.
Assessment The nature of the coursework assessment will vary and may be based on written assignments, seminar presentations and a written examination. The research project assessment will consist of an oral presentation and submission of a thesis.

RBF4002 SCIENCE HONOURS
Campus Werribee
Prerequisites RBF4001
Co-requisites
Learning Outcomes
Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be a scientific investigation of a specified topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the scientific investigation described in detail; results and conclusions from the study are elaborated; and an extended discussion presented. The research project will be undertaken in one of the research areas of the School and may, subject to approval, be undertaken at an external location.
Required Reading To be advised by the lecturer.

RBF6710 FOOD ANALYSIS
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology
Content This subject provides an introduction to the laboratory analysis of the chemical, physical and biochemical properties of foods and food components. The subject covers: the reasons for analysing foods; food composition tables and databases; sampling and sample preparation; the proximate analysis system; water activity; analyses of proteins, carbohydrates, lipids, vitamins, minerals and pigments; the use of enzyme based assays for food components; rheology, texture, viscosity and colour of foods – principles and recent developments in analysis; enzymes as processing aids and as deteriorative agents – measurement of food enzymes
Class Contact Three hours per week comprising two hours of lectures/tutorials and one hour of practical laboratory work for one semester.
Assessment Assignments and tests 30%, practical work 20%, final examination 50%.

RBF6720 FOOD MICROBIOLOGY
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology
Class Contact Six hours per week comprising three hours of lectures and tutorials and three hours of practical work for one semester.
Assessment Assignments and tests 30%, Practical work 20%, final examination 50%.

RBF6721 FRUIT AND VEGETABLE SCIENCE AND TECHNOLOGY
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology
Content This subject introduces students to the principles and technology of fruit and vegetable processing and to recent developments in the processing of these commodities. Topics covered include: The fruit and vegetable industry: plant physiology; the biochemistry of fruit ripening; diseases; maturity prediction and testing; post-harvest handling and storage, chilling and freezing, canning, microwave processing, cooking and dehydration; changes in quality. The juicing of fruit and vegetables, product deterioration, blanching treatments, product quality, quality assurance, and legal requirements.
Required Reading A selection of readings compiled by the lecturer.
This subject provides a study of the science and technology of food cereals and grain based products. The technology of baking, ingredients used and their functional properties. The application of molecular genetics to quality improvement in grains.

**Required Reading**

**Recommended Reading**

**Class Contact**
Six hours per week comprising lectures, tutorials, practical work and/or field trips for one semester.

**Assessment**
Assignments and tests 30%, practical work 20%, final examination 50%.

---

**RBF6730 PRESERVATION AND PROCESSING TECHNOLOGY**

**Campus** Werribee

**Prerequisite(s)**
Eligibility for entry to the Master of Science in Food Science and Technology.

**Content**
This subject provides an introduction to the principles and technology of food processing and preservation by traditional and modern techniques and their effects on the safety, appearance and nutritional quality of foods and the implications of processing and preservation methodologies on the physical, chemical, microbiological and nutritional quality of foods. This subject covers: A brief history of the food processing industry. A basic introduction to unit operations. Preservation by moisture control: water activity, intermediate moisture foods, concentration, dehydration and freeze drying. Preservation by heat treatment: pasteurisation, sterilisation, canning. Preservation by chilling and freezing. Chemical preservation and fermentation. Preservation by irradiation. Modified atmospheres. Influence of processing on product safety, quality and nutritional value of foods. Principles of food packaging, packaging requirements.

**Required Reading**
Canovas, G.V. 2003, Unit operations in food engineering. CRC Press, Washington, DC

**Class Contact**
Six hours per week comprising lectures, tutorials, practical work and/or field trips for one semester.

**Assessment**
Assignments and tests 40%, practical work 20%, final examination 40%.

---

**RBF6724 DAIRY SCIENCE AND TECHNOLOGY**

**Campus** Werribee

**Prerequisite(s)**
Eligibility for entry to the Master of Science in Food Science and Technology.

**Content**
This subject provides a study of the science and technology associated with the processing of milk and milk products. The subject covers: Structure of the Dairy Industry; Effects of heat treatment on milk; Processing of milk to various dairy products; Advances in testing of milk and milk products; Quality management of milk and dairy products; Starter cultures and friendly bacteria; Advances in dairy fermentation; UHT of milk and milk products; Membrane technology; Nutritional issues in dairy product development; Dairy ingredients.

**Required Reading**
A selection of readings compiled by the lecturer.

**Recommended Reading**

**Class Contact**
Three hours per week comprising tutorial work and self-directed learning activities for one semester.

**Assessment**
Oral presentation 20%; Written report 80%.
RBF6745 FOOD PRODUCT DEVELOPMENT
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology.
Content This subject provides an introduction to the systematic methods used in the development of new products, market research, product design and specification and evaluation of product development project. This subject covers: Development of aims, objectives and constraints; Collection and analysis of marketing and technical information required for product development; Product idea generation; Screening of new product ideas; Product concept development and testing; Marketing-strategy development, Product development process (project planning, formulation development, process development, shelf-life testing); Consumer testing: Market trial methods and simulation of market size; Product specifications (raw materials, process, finished product); Packaging and labelling, product evaluation, product costing and pricing; Production planning; Market development and product launch.
Class Contact Three hours per week comprising lectures/tutorials and practical work for one semester.
Assessment Assignments and tests 20%, practical work 30%, final examination 50%.

RBF6750 FOOD SAFETY AND QUALITY ASSURANCE
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology.
Content This subject provides an introduction to the concepts and principles of food safety and quality assurance, food legislation, food standards, sensory and objective evaluation of foods and conduct of objective and sensory evaluation tests on foods. The subject covers: sensory attributes and sensory evaluation; sensory perception, use of sensory and objective evaluation in quality control and product development, experimental design and analysis, questionnaire design, taste panels, shelf-life assessment; food law; Australian and International food standards codes, food hygiene regulations, microbiological standards and codes of practice, the development and underlying principles of food standards, Codex standards, export standards; food additives, types, functions, toxicological evaluation and regulations governing usage; toxic substances and contaminants; hygiene and sanitation in food processing and production, techniques for evaluation of food processing plants; quality assurance principles and systems; parameters of food quality and its evaluation and control, role of quality assurance, concepts of total quality control (TQC) and total quality management (TQM), good manufacturing practice, sampling plans, specification writing, hazard analysis and critical control point (HACCP) concept, product recall procedures, Australian and International quality systems.
Required Reading A selection of reading commended by the lecturer.
Class Contact Six hours per week comprising lectures/tutorials and practical work for one semester.
Assessment Assignments and tests 20%, practical work 20%, final examination 60%.

RBF6760 CHEMISTRY OF FOODS
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science (Food Science)
Content The basic components forming the structure of food products consist of the natural materials assembled in relationships that can be altered by the presence of additives, ingredients and processing. The subject covers the composition and macrostructure of food, and the relationships between the basic components and structure and the additives. This will include the interactions between emulsifiers and flavours within a food matrix, and interactions between water-proteins, water, lipids, protein-proteins, protein-lipids, protein-carbohydrates, and carbohydrate-lipids. This subject will also address the influence of processing on basic components and interactions among food components.
Class Contact Six hours per week comprising of three hrs of lectures and three hrs of tutorials and practical work
Assessment Practical work, 20%; 2 Assignments (3000 words each), 30% (2x15%); Final examination (1x3 hrs) 50%.

RBF6910 MINOR PROJECT 1
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology.
Content This subject allows students to conduct a research project of their own design, analyse and interpret data and communicate research findings clearly and concisely in both oral and written form. This subject covers: Conduct of a project on an aspect of food science and technology; Design and development of the study, collection and analysis of data and submission of a written report; Presentation of a seminar on the research work. Subject to approval, the project may be related to the student’s work situation and/or may involve laboratory or plant based work.
Required Reading Students will be responsible for reviewing the current literature on their project topic.
Class Contact Six hours per week of laboratory/tutorial work for one semester.
Assessment Oral Presentation 20%, Written reports 80%.

RBF6920 MAJOR PROJECT 1
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology.
Content In this subject students will conduct a research project of their own design, analyse and interpret data and communicate research findings clearly and concisely in both oral and written form. The project will be carried out on an individual basis under the supervision of a Food Technology staff member of the School of Molecular Sciences and a member of industry where appropriate. The subject involves: Conduct of a thorough literature search on current issues in food science and technology; Design and development of the study; Preparation of a seminar on the research work. Subject to approval, the project may be related to the student's work situation and/or may involve laboratory or plant based work.
Required Reading Students will be responsible for reviewing the current literature on their project topic.
Class Contact Twelve hours per week of laboratory/tutorial work for one semester.
Assessment Oral presentation 20%, Written reports 80%.

RBF6925 MAJOR PROJECT 2
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science (Food Science).
Content Conduct of a project on an aspect of food science and technology; Design and development of the study, collection and analysis of data and submission of a written report; Presentation of a seminar on the research work. Subject to approval, the project may be related to the student's work situation and/or may involve laboratory or plant based work.
Required Reading Students will be responsible for reviewing the current literature on their project topic.
Class Contact Twelve hours per week of laboratory/tutorial work for one semester.
Processes and Guidelines/HandResearchTraining/MajorResearchAreas/Assessment criteria and http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research topics for the Faculty of Health, Engineering and Science may be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

RBF8001 RESEARCH THESIS 1 FULL TIME

This subject is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

RBF8002 RESEARCH THESIS 2 FULL TIME

This subject is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

RBF8011 RESEARCH THESIS 1 PART TIME

This subject is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

RBF8012 RESEARCH THESIS 2 PART TIME

This subject is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

RCM6760 RESEARCH PRACTICE, ETHICS AND COMMUNICATION IN FOOD SCIENCE AND TECHNOLOGY

Campus Werribee

Prerequisite(s) Eligibility for entry to the Master of Science (Food Science).

Content Biometrical techniques in Food Science and Technology. Theories of research process and ethics. Creativity in research and the concepts of discovery and innovation. Experiment organisation, data collection, critical evaluation and result interpretation. Methods of communicating research findings.

Required Reading A selection of readings compiled by the lecturer.


Class Contact Six hours per week comprising 3hrs of lectures and 3hrs of tutorials/practicals.

Assessment Assignments, 20% (2 x 10); Practical work, 30%; Final exam (1 x three hrs), 50%.

RCM1000 MEDICAL, FORENSIC AND ANALYTICAL CHEMISTRY 1

Campus Werribee

Prerequisite(s) Nil.

Content Overview and introduction to the principles and methodology of medical, forensic and analytical chemistry. Medical chemistry: introduction to medical therapeutics and diagnostics, organic and inorganic medical chemistry, nuclear medicine and drug design. Forensic chemistry: introduction to physical evidence, fire and explosion investigation, firearm investigation, drug analysis and the analysis of chemical evidence such as fibres. An introduction to the relevant areas of analytical chemistry include an overview of measurements in the analytical laboratory, solutions and concentrations, and an introduction to classical analytical chemistry including volumetric analysis and methods based on analytical separations.


Recommended Reading Students will be directed towards relevant sections of the medical, forensic and analytical chemistry literature.

Class Contact Three hours of lectures and one hour of tutorials/demonstrations per week.

Assessment Written examination, 100%.

RCM1008 INDUSTRIAL EXPERIENCE 1A

Campus Werribee

Prerequisites Nil

Content Content No formal content; students will be required to provide evidence of 12months full-time (or equivalent part-time) employment in a Chemical Industry acceptable to the Head of School. Students should consult with appropriate staff prior to commencing the subject to ensure their situation is acceptable to the School.

Class Contact Class Contact No set contact hours.

Assessment Assessment Evidence of appropriate industrial experience in the form of a letter from the employer detailing the experience is required.

RCM1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A

Campus St Albans

Prerequisite(s) Nil

Content Chemistry relevant to biological sciences including the topics which follow: Matter and energy, Measurement, Atomic theory and the periodic table, Chemical and physical bonding, Chemical formulae, reactions and equations, Molecular structure and the state of matter, Solutions and aqueous chemistry.


Recommended Reading To be advised by lecturer.

Class Contact Six hours per week for one semester comprising three hours of lectures, one hour tutorial and two hour practical classes.
Assessment Assignment, 10%; Practical work, 20%; Examination, 70%.

RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B
Campus St Albans
Prerequisite(s) RCS1110 Chemistry for Biological Sciences A or equivalent
Content Chemistry topics relevant to biological sciences and which incorporate specific reference to biological systems. Topics will include the following: Basic physical chemistry including chemical equilibrium and kinetics, acids and bases, Thermochemistry, Oxidation and reduction, Inorganic and nuclear chemistry with reference to selected elements of biological chemistry, Organic chemistry and biological chemistry.
Recommended Reading To be advised by lecturer.
Class Contact Six hours per week for one semester comprising three hours of lectures, one hour tutorial and two hour practical classes.
Assessment Assignment, 10%; Practical work, 20%; Examination, 70%.

RCS1601 CHEMISTRY 1A
Campus Werribee
Prerequisite(s) Nil.
Content Chemistry methods and measurements; atomic theory and the periodic table; structures and properties of ionic and covalent compounds; chemical equation, reactions and solutions; co-ordination chemistry, acids and bases.
Required Reading Chang, R., Essential Chemistry (A Core Text for General Chemistry), 2nd edn, McGraw Hill. Laboratory manuals as directed.
Recommended Reading Denniston, Topping, Caret, General, Organic and Biochemistry, 3rd edn, McGraw-Hill.
Class Contact Seven hours per week comprising three hours of lecture, three hours of laboratory and one hour of tutorial.
Assessment Laboratory work, 30%; tutorial assessments, 15%; examination, 55%.

RCS1602 CHEMISTRY 1B
Campus Werribee
Prerequisite(s) Nil.
Content States of matter; physical and chemical changes (energy, rate and equilibrium); oxidation-reduction reaction (electrochemistry); the nucleus, radioactivity and nuclear medicine; Organic chemistry: saturated and unsaturated hydrocarbons; alcohol phenols, thiols and ethers; aldehydes and ketones; carboxylic acids and their derivatives; amines and amides; biological chemistry.
Required Reading Chang, R., Essential Chemistry (A Core Text for General Chemistry), 2nd edn, McGraw Hill. Laboratory manuals as directed.
Recommended Reading Denniston, Topping, Caret, General, Organic and Biochemistry, 3rd edn, McGraw-Hill.
Class Contact Seven hours per week comprising three hours of lecture, three hours of laboratory and one hour of tutorial.
Assessment Practical work, 30%; tutorial assessments, 15%; examination and assignment, 55%.

RCS2000 INDUSTRIAL EXPERIENCE 2A
Campus Werribee
Prerequisites Nil
Content Content No formal content; students will be required to provide evidence of 12months full-time (or equivalent part-time) employment in a Chemical Industry acceptable to the Head of School. Students should consult with appropriate staff prior to commencing the subject to ensure their situation is acceptable to the School.
Class Contact Class Contact No set contact hours.
Assessment Assessment Evidence of appropriate industrial experience in the form of a letter from the employer detailing the experience is required.

RCS2100 ORGANIC CHEMISTRY 2A
Campus Werribee
Prerequisite(s) RCS1602 Chemistry 1B
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
- use mechanisms to explain simple organic chemical reactions;
- describe the factors which control simple organic reactions;
- characterise aromatic compounds and describe their common reactions;
- provide examples of simple reactions involving carbanions and carboxylations;
- perform common practical organic chemistry manipulations.
Content The aims of this unit are to introduce students to fundamental aspects of synthetic organic chemistry, organic reaction mechanisms along with applications of spectroscopy to organic chemistry. The topics covered include: aromatics, electrophilic and nucleophilic aromatic substitution reactions. The chemistry of carbanions and of carboxylations. Practical exercises providing substantial 'hands-on' experience with chromatographic and spectroscopic instrumentation will complement the lecture material.
Class Contact Two hours of lectures and three hours of practical classes per week for one semester.
Assessment End-of-semester examination, 70% (P2, I2, W2); Practical work, 20% (P2, A2, I2, W2, O2); Assignment, 10% (P2, I2).

RCS2200 ORGANIC CHEMISTRY 2B
Campus Werribee
Prerequisite(s) RCS2100 Organic Chemistry 2A
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
- define free radicals and explain their common reactions;
- describe and explain basic polymers, their preparation and properties;
- describe and evaluate photochemical and pericyclic reactions;
- utilise the disconnection approach to devise practical syntheses of simple organic compounds.
Content The aims of this unit are to build upon the concepts introduced in RCS2100 Organic Chemistry 2A. Topics covered will include: the chemistry of free radicals; an introduction to polymer chemistry; photochemistry and molecular orbital reactions and an introduction to the design of synthetic sequences. Practical exercises providing substantial 'hands-on' experience with chromatographic and spectroscopic instrumentation will complement the lecture material.
Class Contact Two hours of lectures and three hours of practical classes per week for one semester.
Assessment End-of-semester examination, 70% (P2, I2, W2); Practical work, 20% (P2, A2, I2, W2, O2); Assignment, 10% (P2, I2).

RCS2502 MEDICAL CHEMISTRY 2
Campus Werribee
Prerequisite(s) RCS1000 Medical, Forensic and Analytical Chemistry 1 or equivalent.
Learning Outcomes At the conclusion of this unit students will be able to:
- discuss the importance of medical inorganic chemistry and minerals in health;
- identify the structure carbohydrates and lipids; and explain their analysis;
- characterise amino acids and proteins and explain their preparation, analysis and basic structure;
- discuss the principles behind drug-protein interactions.
Content The aim of this subject is to introduce students to aspects of Medical Chemistry. The topics covered include Nuclear Chemistry and the application of Radioisotopes in Medical Chemistry. Bioinorganic Chemistry and the role of inorganic compounds in medicine. The synthesis and analysis of proteins, the structure and physiology of carbohydrates and lipids and a brief introduction to drug/molecule interactions.
RCS2503 FORENSIC CHEMISTRY 2
Campus Werribee
Prerequisite(s) RCS1000 Medical, Forensic & Analytical Chemistry 1 or equivalent.

Learning Outcomes At the conclusion of this unit students will be able to:
• describe current practices in arson investigation including taking samples, recovery and gas chromatographic analysis of ignitable liquid residues and identification of accelerants;
• develop analytical procedures to investigate environmental pollutants;
• develop extraction procedures for drugs and metabolites in biological samples;
• define genome and chromosome structure and the nature of repeat regions;
• describe the principles of DNA replication and PCR;
• perform a number of forensic analyses including Duquenois-Levine test for marijuana, fingerprinting, Plaster of Paris casts of footprints, colour tests for drugs in white powders, drug analysis using IR and UV-Vis spectrophotometry, inks by TLC, alcohol by GC and metal poisons by AA.

Content This subject builds upon the concepts introduced in Medical, Forensic & Analytical Chemistry 1 and introduces students to forensic chemical techniques. Topics covered include: arson investigation, forensic toxicology, environmental forensics and an introduction to molecular biology. Practical exercises provide 'hands-on' experience in a range of forensic chemical techniques.


Content To be advised by lecturer and will be based on the most current texts and journal articles that are relevant to the subject.

Assessment Students will be assessed on the basis of an examination, 70%; and practical work, 30%. Students must pass the practical component in order to pass this subject.

RCS2602 ANALYTICAL CHEMISTRY 2B
Campus Werribee
Prerequisite(s) RCS1601 Chemistry 1A, RCS1602 Chemistry 1B or equivalent.

Content Principles of instrumentation. Chromatographic methods including gas chromatography and liquid chromatography. Introduction to electrochemical methods. Analytical separation techniques and processes. Practical exercises will provide substantial 'hands on' experience with modern analytical instruments and will illustrate important analytical and physicochemical techniques.

Required Reading Students should possess a good basic analytical chemistry text such as Skoog, D.A., West, D.M. and Holler, F.J., Fundamentals of Analytical Chemistry, Holt Rinehart and Winston.


Recommended Reading To be advised by lecturer and will be based on the most current texts and journal articles that are relevant to the subject.

Assessment Students will be assessed on the basis of an examination, 70%; and practical work, 30%. Students must pass the practical component in order to pass this subject.

RCS3000 INDUSTRIAL EXPERIENCE 3A
Campus Werribee
Prerequisites Nil

Content No formal content; students will be required to provide evidence of 12months full-time (or equivalent part-time) employment in a Chemical Industry acceptable to the Head of School. Students should consult with appropriate staff prior to commencing the subject to ensure their situation is acceptable to the School.

Class Contact Class Contact Nil set contact hours.

Assessment Evidence of appropriate industrial experience in the form of a letter from the employer detailing the experience is required.

RCS3601 ANALYTICAL CHEMISTRY 3A
Campus Werribee
Prerequisite(s) RCS2601 Analytical Chemistry 2A and RCS2602 Analytical Chemistry 2B or equivalent.

Content Chemical literature and use of library resources; modern trends in chemical analysis; review of analytical methodologies; an operational model for analytical chemistry; evaluation and criticism of analytical results; development of new analytical methods and trends in analytical research; project planning; selection and purchase of analytical equipment and apparatus; optimisation of analysis. Applications of advanced spectroscopy to organic analysis and structure elucidation. Analysis of carbohydrates, lipids, terpenes, steroids, heterocyclic compounds and proteins.


Recommended Reading To be advised by lecturer and will be based on the most current texts and journal articles that are relevant to the subject.

Assessment Students will be assessed on the basis of an examination, 70%; and practical work, 30%. Students must pass the practical component in order to pass this subject.

Recommended Reading Students will be referred to various texts and journals during the subject and will be expected to read widely from them.

Class Contact Two hours of lectures per week and four hours of laboratory classes per week for one semester.

Assessment Students will be assessed on the basis of an examination, 70%; and practical work, 30%. Students must pass the practical component in order to pass this subject.

RCS3602 ANALYTICAL CHEMISTRY 3B
Campus Werribee
Prerequisite(s) RCS2601 Analytical Chemistry 2A and RCS2602 Analytical Chemistry 2B or equivalent.

Content Principles, instrumentation, interferences and applications in chemical analysis of absorption and emission spectroscopy including vibrational, rotational, advanced UV visible and fluorescence spectroscopy, and flameless AAS. Electrochemical methods of analysis including ion-selective electrodes, and modern polarography and stripping voltammetry. Flow injection analysis. Capillary electrophoresis. Specialized physical techniques of analysis including thermal methods, techniques for surface analysis and the analysis of polymer molecular weights. Practical work providing substantial 'hands on' experience will complement the lecture material.


Recommended Reading Students will be referred to various texts and journals during the subject and will be expected to read widely from them.

Class Contact Two hours of lectures per week and four hours of laboratory classes per week for one semester.

Assessment Students will be assessed on the basis of an examination, 70%; and practical work, 30%. Students must pass the practical component in order to pass this subject.

RCS3603 MEDICAL CHEMISTRY 3 A
Campus Werribee
Prerequisite(s) RCS2502 Medical Chemistry 2and RCS2100 Organic Chemistry 2A or equivalent.

Learning Outcomes At the conclusion of this unit students will be able to:

• apply the principles of various organic synthetic procedures to drug synthesis;
• categorise the different classes of protecting groups and describe their role in organic synthesis;
• evaluate various chiral synthetic methodologies and their application to drug synthesis;
• discuss the importance of X-Ray diffraction and its application to determining the structure of small molecules and proteins;
• describe the fundamentals of protein chemistry in relation to the isolation and purification of proteins;
• discuss the principles and application of combinatorial synthesis;
• utilise basic computer modelling as applied to drug design.

Content The synthesis of new chemicals and biochemicals which mimic natural molecules. Methods used to assess the purity of synthetically generated products. Methods used for the bioassay of chemically synthesized chemical. The design of chemicals using 3D drug design.


Class Contact Two hours of lectures and four hours of practical classes per week.

Assessment Practical work, 40%; final examination, 60%.

RCS3604 MEDICAL CHEMISTRY 3 B
Campus Werribee
Prerequisite(s) RCS2502 Medical Chemistry 2.

Content Students enrolled in medical chemistry 3 will become skilled in the use of the theoretical basis of advanced physico-chemical and biochemical methods for body fluid analysis for the diagnosis of human diseases. These techniques will include ELISA assays and the analysis of human tissues using techniques such as PCR to determine the DNA profile of human tissues.

Recommended Reading A range of textbooks and journal articles will be recommended by the lecturer.

RCS3605 FORENSIC METHODS 3A
Campus Werribee
Prerequisite(s) RCS2503 Forensic Chemistry 2 or equivalent.

Learning Outcomes At the conclusion of this Unit students will be able to:

• apply the principles of chemical fingerprinting including identifying oil from oil spills and using isotopic ratios to authenticate foodstuffs;
• describe the practice of GSR analysis including sampling, bulk analysis, particle analysis and development of powder patterns;
• describe the role of modern techniques such as GC, pyrolysis GC and energy dispersive x-ray analysis as applied to samples of forensic interest such as paint and pesticides in foodstuffs;
• perform a number of forensic analyses including GSR on hands using FAAS, quinine in urine by fluorometry, drugs in white powders by HPLC, ignitable liquids in fire debris by GC, IR microscopy of fibres, opiates in opium powder by GCMS and refractive index of glass.

Content Forensic Methods 3A provides training in sophisticated methods of analysis as currently applied to the examination of materials that have in some way been associated with crime. Topics covered include: gunshot residue analysis, chemical fingerprinting, paint analysis and pesticide analysis. Practical exercises provide 'hands-on' experience in a range of forensic chemical techniques.


Recommended Reading Students will be directed to relevant sections of Safarstein, R., (ed.), Forensic Science Handbook Vol 1, 2 and 3, Prentice Hall.

Class Contact Two hours of lectures and three hours of practical classes per week for one semester.

Assessment Practical work, 30%; and examination, 70%.

RCS3606 FORENSIC METHODS 3B
Campus Werribee
Prerequisite(s) RCS2503 Forensic Chemistry 2 or equivalent.

Learning Outcomes At the conclusion of this unit students will be able to:

• discuss important considerations in the examination of different types of physical evidence;
• describe the role of DNA profiling in forensic science; describe the nature of molecular markers and carry out laboratory procedures related to the above such as DNA amplification and separation;
• define the role of forensic science within the legal system;
• perform a number of forensic analyses including GSR on hands using FAAS, quinine in urine by fluorometry, drugs in white powders by HPLC, ignitable liquids in fire debris by GC, IR microscopy of fibres, opiates in opium powder by GCMS, refractive index of glass, DNA isolation, amplification and separation of PCR products using electrophoresis.

Content Forensic Methods 3B provides training in sophisticated methods of analysis as currently applied to the examination of materials that have in some way been associated with crime. Various topics in this subject will be delivered by practicing forensic scientists. These include crime scene investigation, chemical trace evidence, fire and explosion investigation, fingerprints, drug analysis, clandestine laboratory scene investigation, forensic toxicology and DNA profiling.

Legal studies is also included and introduces students to the legal system, courtroom practices and expert testimony. Practical exercises provide 'hands-on' experience in a range of forensic chemical techniques.

FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact Two hours of lectures and three hours of practical classes per week for one semester.

Assessment Practical work, 30%; and assignments/examination, 70%.

RCS3607 ADVANCED ANALYTICAL ANALYSES
Campus Werribee
Prerequisites RCS3601 Analytical Chemistry 3A
Co-requisites
Learning Outcomes To provide students with an understanding of the design, interpretation and application of a range of advanced analytical techniques.

Content This subject will introduce FT-NMR and associated techniques, 13C NMR, decoupling, relaxation, nOe's and DEPT. The role and interpretation of 2D NMR experiments such as COSEY, HSBC and NOESY. The use of LC/MS and MSn in the identification and characterisation of a range of chemical classes will be discussed. Particular emphasis will be placed upon single ion monitoring and fragment monitoring. Other techniques including fluorescence spectroscopy and its role in chemical analysis will also be discussed.


Class Contact 2 hrs of lectures per week

Assessment Assessed by two assignments and a written examination. Each assignment is worth 20% and has a 1000 word limit and may be supplemented with an appropriate number of figures, charts and/or tables. The assignments will be spread evenly over the semester. The written examination is worth 60% and there are no specific conditions for the exam.

RCS3608 POLYMER TECHNOLOGY
Campus Werribee
Prerequisites SCS2521 Applied Chemistry 2 – Organic
Co-requisites
Learning Outcomes To provide students with an understanding of polymer chemistry as it relates to the plastics industry.

Content This subject will introduce students to the preparation of polymers, including radical and ionic polymerisation as applied to chain reaction and step reaction polymerisation reactions. The determination of polymer molecular weight and analysis using GPC will be presented. The physical properties of polymers and their importance to the plastics industry will also be a focus of this subject.


Recommended Reading Billmeyer, F. W. Jr., Textbook of Polymer Science, 3rd Edn., Wiley, New York, 1984 [N.B. This is the latest edition of this most popular, well-renown book on basic polymer science!]. Students will be directed towards relevant sections of the analytical Chemistry Literature.

Class Contact 2 hrs of lectures per week

Assessment Assessed by one assignment and a written examination. The assignment is worth 20% and has a 1000 word limit and may be supplemented with an appropriate number of figures, charts and/or tables. The written examination is worth 70% and there are no specific conditions for the exam.

Assessment The assessment will vary and may be based on written assignments, seminar presentations and a written examination.

RCS4601 HONOURS PROJECT PART TIME
Campus Werribee
Prerequisites Nil.

Content The program will consist of a research project and a coursework component. The major focus of the course component is research methodology and subjects include experimental design, statistics in research, data analysis, computer applications and software, literature analysis and critical appraisal, ethics in research, scientific writing and data presentation. The research project will be undertaken in one of the research areas of the School and may, subject to approval, be undertaken at an external location. Required Reading To be advised by the lecturer. Normally the coursework component will be conducted in the first two semesters and the research component in the third and fourth semester.

Required Reading To be advised by the lecturer. Normally the coursework component will be conducted in the first two semesters and the research component in the third and fourth semester.

Class Contact An average of 10 hours per week for four semesters.

Assessment The nature of the coursework assessment will vary and may be based on written assignments, seminar presentations and a written examination. The research project assessment will consist of an oral presentation and submission of a thesis.

RCS4602 HONOURS PROJECT
Campus Werribee
Prerequisites
Co-requisites RCS4201 and RCS4610

Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be a scientific investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the scientific investigation described in detail; results and conclusions from the study are elaborated; and an extended discussion presented. The research project will be undertaken in one of the research areas of the School and may, subject to approval, be undertaken at an external location.

Required Reading To be advised by supervisor.

Recommended Reading

Class Contact An average of 30 hours per week for one semester

Assessment The assessment will consist of an oral presentation and submission of a thesis.

RCS4610 HONOURS PROJECT PART TIME
Campus Werribee
Prerequisites Satisfactory completion of an appropriate undergraduate degree program with at least a credit average in the final year.

Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be a scientific investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the scientific investigation described in detail; results and conclusions from the study are elaborated; and an extended discussion presented. The research project will be undertaken in one of the research areas of the School and may, subject to approval, be undertaken at an external location.

Required Reading To be advised by supervisor.

Recommended Reading

Class Contact An average of 15 hours per week for one semester

Assessment The assessment will consist of an oral presentation and submission of a thesis.

RCS5100 RESEARCH METHODOLOGY
Campus Footscray Park
Prerequisite(s) Nil.

Content Experimental design, statistics in research, data analysis, computer applications and software, literature analysis and critical appraisal, ethics in research, scientific writing and data presentation. Qualitative data analysis.

Required Reading To be advised by lecturer.

Class Contact one hour/week x 26 weeks = 3 hours per week for one semester- lectures and computer labs.

Assessment Continuous assessment by assignments only.

RCS5111 PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT
Campus Footscray Park
Prerequisite(s) Nil.

Required Reading There are no standard textbooks for this subject. Reading to be advised by the lecturer.


Class Contact Three hours of lectures per week for one semester.
Assessment Assessment will be by four assignments (4 x 10% = 40%) and one end of semester exam (60%). Each assignment has a 1,000 word limit (no more than 10 pages) and may be supplemented with an appropriate number of figures, charts and/or tables. Assignments and assignment deadlines will be spread evenly across the semester. There are no special conditions for exams.

RCS5121 ENVIRONMENTAL LAW AND STANDARDS 1
Campus Footscray Park
Co-requisites Nil.


Class Contact Three hours of lectures per week for one semester.
Assessment Assignments, 40%; examination, 60%.

RCS5131 WATER POLLUTION MONITORING & LIQUID WASTE MANAGEMENT
Campus Footscray Park
Prerequisite(s) Nil.

Required Reading There are no standard textbooks for this subject. Reading to be advised by the lecturer.


Class Contact Three hours of lectures per week for one semester.
Assessment Assessment will be by four assignments (4 x 10% = 40%) and one end of semester exam (60%). Each assignment has a 1,000 word limit (no more than 10 pages) and may be supplemented with an appropriate number of figures, charts and/or tables. Assignments and assignment deadlines will be spread evenly across the semester. There are no special conditions for exams.

RCS5132 ENVIRONMENTAL LAW AND STANDARDS 2
Campus Footscray Park
Prerequisite(s) Nil.


Class Contact Three hours of lectures per week for one semester.
Assessment Continuous assessment by assignments, presentations and reports.

RCS5141 AIR QUALITY MANAGEMENT
Campus Footscray Park
Prerequisite(s) Nil.

Required Reading To be advised by lecturer.

Class Contact Three hours of lectures or computer labs per week for one semester.
Assessment Assignments, 40%; examination, 60%.

RCS5192 CLEANER PRODUCTION TECHNOLOGY AND WASTE MINIMISATION
Campus Footscray Park
Prerequisite(s) Nil.

Required Reading To be advised by lecturer.

Class Contact Three hours per week for one semester, consisting of lectures and site visits.

Assessment Assignment and site visit reports, 40%; examination, 60%.

RCS6000 PROJECT
Campus Footscray Park
Prerequisite(s) Nil.Normally requires completion of one full year of coursework equivalent to the Graduate Diploma in Environmental Management. In some circumstances a limited number of coursework subjects may be taken concurrently with the project.

Content A program of approved research and enquiry into an area related to environmental management. The project may be conducted on or off campus and may involve an industry partner.

Required Reading To be advised by project supervisor(s)

Recommended Reading To be advised by project supervisor(s)

Class Contact 150 hrs of research activity over the course of the program.

Teaching Method Academic and/or Industry supervision

Assessment By examination of a completed project report, normally in the range of 12,000 to 20,000 words
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**RC8001 RESEARCH THESIS 1 FULL TIME**
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

**RC8002 RESEARCH THESIS 2 FULL TIME**
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

**RC80011 RESEARCH THESIS 1 PART TIME**
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

**RC80012 RESEARCH THESIS 2 PART TIME**
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchHandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/PolicyProcessesandGuidelines/

**RMS1000 BIOTECHNOLOGY PROFESSION**
Campus Werribee
Prerequisite(s) Nil
Content Context specific materials from the world of biotechnology will be used to develop the students' awareness and understanding of the professional skills and duties that comprise professional practice. Practicing biotechnologists and other scientists will be invited to give presentations on their experiences in the profession. The ethics of biotechnology practice will be emphasised and students will be encouraged to give formal and impromptu presentations on biotechnology and society.
Required Reading Students will be asked to review a selection of papers from the literature.
Recommended Reading To be advised
Class Contact Four hours per week for one semester consisting of 2 x 2hr workshops per week.
Assessment Assignment two x 1000 word (30%), Oral presentations x 2 (20%), Examination (50%).

**RMS1171 BIOCHEMISTRY 1 (OSTEOPATHY)**
Campus St Albans, City Flinders
Prerequisite(s) Nil
Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
1. Describe various nutrients, and discuss the structures and functions of biological macromolecules and their component subunits;
2. Explain how nutrients are metabolized;
3. Discuss the importance of clinical biochemistry and the role of clinical enzymology in the diagnosis and prognosis of various diseases in the human body;
4. Explain the biochemical mechanism of inflammation and allergy;
5. Define the different types of muscle;
6. Use muscle biochemistry to explain muscle contraction and relaxation;
7. Outline various metabolic pathways for energy production in muscle;
8. Predict and explain the clinical implications resulting from aberrations in pathways or deficits in nutrient intake;
9. Describe cellular signalling from intracellular and extracellular perspectives, including the molecules involved.

Content Insights into biochemical events that occur in the human body. This includes an overview of nutrients such as proteins, carbohydrates, vitamins and fats, and how nutrients are metabolized. Specific biochemical systems occurring in muscle that will be studied include glycolysis, the tricarboxylic acid (TCA) cycle, oxidative phosphorylation, gluconeogenesis, glycogen and lipid metabolism. Other topics include the biochemistry of allergy and inflammation; nervous system biochemistry; the extracellular matrix, calcium and bone metabolism. The importance of clinical biochemistry and clinical enzymology will be discussed. Cellular signalling will be dealt with in detail.


**RMS1272 BIOCHEMISTRY (OSTEOPATHY) 2**
Campus St Albans, City Flinders, Off Campus
Prerequisite(s) RMS1171 Biochemistry (Osteopathy) 1; or equivalent.
Co-requisites Nil

Learning Outcomes On successful completion of this unit, it is expected that students will be able to: 1. Describe biochemical events that occur in the human body; 2. Explain the biochemical and pathological basis of metabolic diseases; 3. Make cautious interpretations of test results, taking into account various factors that can affect the results; 4. Correctly handle commonly used biochemical laboratory equipment, such as micropipettes, spectrophotometers, burettes, glassware, centrifuges; 5. Critically analyse data obtained in experiments; 6. Write formal laboratory reports in a conventional scientific manner; 7. List principles of Good Laboratory Practice (GLP) and apply these principles in the laboratory at all times; 8. Behave in a safety-conscious manner in a laboratory.

Content Further insights into the biochemical events that occur in the human body. Biochemical pathology: inborn errors of metabolism and diseases in the human body; 2. Define the different types of muscle; 3. Make cautious interpretations of test results, taking into account various factors that can affect the results; 4. Correctly handle commonly used biochemical laboratory equipment, such as micropipettes, spectrophotometers, burettes, glassware, centrifuges; 5. Critically analyse data obtained in experiments; 6. Write formal laboratory reports in a conventional scientific manner; 7. List principles of Good Laboratory Practice (GLP) and apply these principles in the laboratory at all times; 8. Behave in a safety-conscious manner in a laboratory.


Class Contact Three (3) hours per week or equivalent for one semester comprising tutorials and laboratory practicals. Practical sessions have a hurdle requirement of 100% attendance.

Assessment Laboratory practical performance and reports (50%); one theory and practical skills examination (25%); clinical case study workshops (25%).

RMS3000 BIOPROCESSING TECHNOLOGY

Campus Werribee

Prerequisites RBF2300

Content Topics include the principles of biochemical engineering, process flow charts, material and energy balances, fluid statics and dynamics, bioreactor design, production and maintenance of commercial strains, scale up, downstream processing including harvesting, concentration and purification of bioproducts, sterilization.


Class Contact 5 hours per week comprising 3 hours of lectures and 2 hours of laboratory work.

Assessment Assignment (1 x 2000 words) 20%; Laboratory Reports (4 x reports) 30% Exam (1 x 3 hrs) 50%

RMS3010 BIOPROCESSING APPLICATIONS

Campus Werribee

Prerequisite(s) Nil

Content Topics include enzyme production and applications, algal biotechnology, bioremediation, bioleaching of metals from low grade ore, commercial and domestic wastewater treatment, biomass conversion and microbial fuel production. The ethical issues associated with these topics will be discussed.


Class Contact 5 hours per week comprising three hours of lectures and two hours of laboratory work.

Assessment Assignment (1 x 2000 words), 20%; Laboratory Reports (4 x reports), 30%; Exam (1 x 3 hrs), 50%.

RMS3020 GENOMICS, PROTEOMICS AND BIOINFORMATICS

Campus Werribee

Prerequisite(s) RBF2520 Biochemistry 1.

Content An overview and definitions of terms; the logic, scope and rationale of genomics and proteomics; descriptions of approaches used in genomics and proteomics; applications of bioinformatics including accessing internal resources such as GenBank and EMBL, data mining, and using programs such as BLAST and FASTA; examples of applications in a range of settings including forensics, drug design, medical research. The theory underpinning a range of analytical techniques used in nucleic acid and protein analysis will also be covered. Ethical issues concerning the ownership of and access to information in databases will, as far as is possible, be covered.


Class Contact 5 hours per week comprising three hours of lectures and two hours of laboratory work.

Assessment Assignment (1 x 3000 words), 20%; Laboratory Reports (10 x reports), 30%; Exam (1 x three hrs), 50%.

RMS3030 GENETIC ENGINEERING

Campus Werribee, St Albars

Prerequisites RBF2520 Biochemistry 1; RBF2390 Molecular Genetics.

Content The subject will include gene cloning, PCR, restriction enzymes and their uses; site-directed mutagenesis; heterologous gene expression systems; DNA profiling and forensics; Southern and Northern Blotting; gene mapping; transgenics and gene knockouts; the Human Genome Project and gene therapy; recombinant DNA-based medical diagnostics; positional cloning; plant genetic engineering; and the ethics, risks and benefits of genetic engineering.


Class Contact 5 hours per week comprising three hours of lectures and two hours of laboratory work.

Assessment Assignment 20%; Laboratory Reports (4 x reports), 25%; Exam (1 x three hrs), 55%.

RMS3040 PROJECT 1 – BIOTECHNOLOGY

Campus Werribee

Prerequisite(s) Students would normally be expected to have completed all Year 1 and 2 subjects.

Content This subject covers project methodology, experimental and analytical design, and research plan preparation. A project will be selected by the student in consultation with academic staff and will, as far as is possible, address a genuine research issue related to Biotechnology.

Required Reading Third Year Project Study Guide, 2006, Victoria University; Students will be required to review from the current literature a selection of papers related to their chosen topic.

Recommended Reading Texts and peer-reviewed literature related to the chosen topic.

Class Contact 6 hours per week comprising laboratory work and workshops. br>Assessment Written proposal (1 x 2,500 word), 30%; Poster presentation, 15%; Journal club, 10%; Critical Review (1 x 2000 words), 25%; Oral presentation 20%.

RMS3045 PROJECT 2 – BIOTECHNOLOGY

Campus Werribee

Prerequisite(s) Students would normally be expected to have completed Project 1-Biotechnology.

Content This subject covers project methodology, experimental and analytical design, research plan preparation, analysis of results and thesis writing. A project will normally have been selected by the student in consultation with academic staff in the prerequisite subject, Project 1-Biotechnology.

Required Reading Third Year Project Study Guide, 2006, Victoria University; Students will be required to review from the current literature a selection of papers related to their chosen topic.

Recommended Reading Texts and peer-reviewed literature related to the chosen topic.

Class Contact 6 hours per week comprising laboratory work and workshops.

Assessment 6 hours per week comprising laboratory work and workshops.

RMS3050 ADVANCED MEDICAL MICROBIOLOGY

Campus Werribee

Prerequisite(s) RBF2310 Microbiology 2 or equivalent.
Content The unit will focus on the molecular aspects of microbial pathogenesis and highlight the principal intervention strategies used to treat infectious diseases. The emphasis will be on the relationship between a microorganism (bacteria, viruses and protozoans) and its human host. An in depth review of the life cycles of several organisms will inform discussion of the current research in the areas of pathogenesis, genetic and phenotypic variation in pathogens and the implications for treatment and control strategies. Consideration will be given to the ethical issues relating to eg vaccination protocols and antimicrobial therapy.

Required Reading To be advised by the lecturer.

Recommended Reading To be advised by the lecturer.

Class Contact Three hours per week comprising lectures and tutorials.

Assessment Assignment (1 x 3000 words), 40%; Exam (1 x three hrs), 60%.

RMS3060 MICROBIAL TECHNOLOGY AND CELL CULTURE
Campus Werribee
Prerequisite(s) RBF2300 Microbiology 1 or equivalent.

Content Topics include batch, fed-batch and continuous culture, bioreactors and their various modes of operation, plant cell culture and animal cell culture. Topical issues related to the ethics associated with the source and use of various cell lines eg. stem cells, will be discussed.


Class Contact three hours per week, comprising lectures and practical work in alternating weeks.

Assessment Laboratory Reports (3 x reports), 40%; Exam (1 x two hrs), 60%.

RMS5110 MOLECULAR GENETICS THEORY
Campus Werribee
Prerequisite(s) Nil.

Content This subject will cover principles of and developments in molecular biology, gene structure and function, and molecular genetics. The theoretical component will include topics such as prokaryotic and eukaryotic genome structure, multigene families, genomic rearrangements including transposable elements, methylation and imprinting of DNA and repair mechanisms. The subject will also cover theoretical aspects of genetic engineering or recombinant DNA technology such as plasmid biology, cloning vectors and recombinant cloning strategies, and ethical concerns related to these technologies.


Class Contact Three hours of class contact time per week consisting of lectures and tutorials.

Assessment One assignment (3000 words, 50%); tests (5x15 min, 10%); and final examination (3 h, 40%).

RMS5120 APPLIED GENETIC ENGINEERING
Campus Werribee
Prerequisite(s) or Co-requisite RMS5110 Molecular Genetics Theory.

Content This subject will cover practical aspects of molecular genetics and recombinant DNA technology. This will include more practical aspects of topics covered in Molecular Genetics Theory such as as plasmid biology, cloning vectors and recombinant cloning strategies, Northern and Southern blotting, PCR and DNA sequencing. Applications of these techniques in plant, animal biotechnology and in human applications will be discussed.


Class Contact Three hours per week practicals or workshops for one semester.

Assessment Practical work (70%); One assignment (3000 words, 30%).

RMS5130 FUNCTIONAL GENOMICS & BIOINFORMATICS THEORY
Campus Werribee
Prerequisite(s) or Corequisite Molecular Genetics Theory (RMS5110)

Content Topics covered include genome and proteome analysis, expression analyses such as microarrays, proteome analysis such as 2-D electrophoresis, MALDI-TOF and ESI analysis. The bioinformatics section will cover sequence analysis using worldwide databases such as GenBank, EMBL and KEGG. It will examine how the databases have been organized, what they contain and programs available to analyse the data from them. Programs used for sequence similarity searching, alignment of sequences, in silico PCR primer design, translation and finding of protein motifs will be examined.


Class Contact 36 hours (3 hours lectures/workshops per week)

Assessment One written assignment (3000 words, 30%); tests (1x1h, 20%) and final examination (3 h, 50%).

RMS5135 FUNCTIONAL GENOMICS & BIOINFORMATICS APPLICATIONS
Campus Werribee
Prerequisite(s) or Co-requsite Molecular Genetics Theory, (RMS5110), Functional Genomics & Bioinformatics Theory (RMS5130)

Content This subject will complement the theoretical subject, Functional Genomics and Bioinformatics Theory (which is a pre- or co-requirement for this subject). It will consist of hands-on practicals or workshops using data generated from genome and proteome analysis experiments. The computer laboratory exercises will include analysis of gene array data, sequence database searching using data mining tools such as BLAST and FASTA, as well as analysis tools such as ORF finder, Flip-Six-Frames, BestFit and ClustalW and PCR-Prime.

Class Contact 36 hours

Assessment Practical exercises and reports (70%); assignment (3000 words, 30%).

RMS5140 BIOPROCESS TECHNOLOGY PRINCIPLES
Campus Werribee
Prerequisite(s) Nil.

Content Principles of biochemical engineering, material and energy balance, fermentation technologies, bioreactor design and applications, harvesting and purification of bioproducts, filtration systems and commercial-scale applications of biological-based systems.


Class Contact Three hours per week of lectures/tutorials.

Assessment One assignments (3000 words, 30%); examination (3h, 70%).
RMS5145 BIOPROCESSING TECHNOLOGY
APPLICATIONS
Campus Werribee
Prerequisite(s) Nil.
Content This subject will provide students with knowledge in the cultivation of microorganisms and higher eukaryotic cells at the small-scale laboratory and commercial scales. This includes plant culture, microbial fermentations and animal cell culture techniques. Topics will include batch, fed-batch and continuous cultures and bioreactors. The technology of stem cells will also be introduced and ethical issues regarding these will be discussed.
Assessment Three practical reports (40%); final examination (3hrs, 60%).

RMS6140 CELL CULTURE AND FERMENTATION TECHNOLOGY
Campus Werribee
Prerequisite(s) Nil.
Content This unit will examine social and technical issues in biotechnology from an ethical viewpoint. Environmental and human impacts of genetic engineering will be discussed. The obligations to patients and the community will be described in the regulations governing manufacture and clinical trials of new drugs. Comparisons will be made between drugs and devices, human and veterinary products, and different national systems.
Assessment Practical and workshops (30%); assignment (30%) and final examination (3hrs, 40%).

RMS5150 ETHICS AND REGULATORY AFFAIRS IN BIOTECHNOLOGY
Campus Werribee
Prerequisite(s) Nil.
Content This unit will examine the need for patent protection, patent procedures in Australia, the USA and Europe, and methods of patent searching. Laboratory practices needed in protecting discoveries will be described, as well as the defence of intellectual property (IP) rights. The various options for commercial development will be compared, including licensing, partnerships, and start-up companies. The problems of raising finance will be demonstrated with the preparation of a business plan. Case studies will be used to illustrate both IP and commercialisation issues, and all students will prepare a business plan for a biotechnology product.
Class Contact Three hours per week lectures/tutorials for one semester.
Assessment One assignment (3000 words, 50%); final examination (3hrs, 50%).

RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOG
Campus Werribee
Prerequisite(s) Nil.
Content This unit will examine the need for patent protection, patent procedures in Australia, the USA and Europe, and methods of patent searching. Laboratory practices needed in protecting discoveries will be described, as well as the defence of intellectual property (IP) rights. The various options for commercial development will be compared, including licensing, partnerships, and start-up companies. The problems of raising finance will be demonstrated with the preparation of a business plan. Case studies will be used to illustrate both IP and commercialisation issues, and all students will prepare a business plan for a biotechnology product.
Class Contact Three hours per week lectures/tutorials for one semester.
Assessment One assignment (3000 words, 50%); final examination (3hrs, 50%).

RMS6130 BIOINFORMATICS I
Campus Werribee
Prerequisite(s) Molecular Genetics Theory. Content This subject will provide an in-depth understanding of how animal productivity and efficiency have been improved using technology such as embryo transfer, embryo splitting, in vitro fertilisation and cloning; principles of genetic engineering as applied to a wide range of plant species including wheat, canola oil and soy beans; use of transgenic technology to produce novel proteins and other biomolecules for the pharmaceutical industry.

RMS6141 ANIMAL AND PLANT BIOTECHNOLOGY
Campus Werribee
Prerequisite(s) Molecular Genetics Theory. Content This subject will provide an in-depth understanding of how animal productivity and efficiency have been improved using technology such as embryo transfer, embryo splitting, in vitro fertilisation and cloning; principles of genetic engineering as applied to a wide range of plant species including wheat, canola oil and soy beans; use of transgenic technology to produce novel proteins and other biomolecules for the pharmaceutical industry.
RMS6145 PROTEIN PRODUCTION, PURIFICATION & ANALYSIS

Campus Werribee

Prerequisite(s) Nil.

Content
Topics covered in the subject will include protein production in mammalian, bacterial, yeast and insect cell expression systems, protein purification and characterisation using methods such as SDS-PAGE, purification using affinity and ion-exchange chromatography, protein crystallization, determination of protein structure, principles of X-ray crystallography and NMR in determining the structure of biological molecules including proteins.

Required Reading


Recommended Reading

Class Contact
Three hours a week lectures, tutorials or practicals.

Assessment
Practical reports (20%); one assignment (3000 words, 30%); final examination (3h, 50%).

RMS6170 DRUG DESIGN & DEVELOPMENT

Campus Werribee

Prerequisite(s) First year undergraduate chemistry.

Content
The concept of drugs and drug targets; drug action at proteins, nucleic acids and receptors; structural considerations; drug discovery, design and development; drug-target interactions; pharmacokinetics and quantitative structure-activity relationships (QSAR); combinatorial synthesis and computational chemistry in medicinal chemistry; specific drugs such as antibacterials, opium analgesics, etc.; case studies with respect to rational drug design.

Required Reading


Class Contact
Two hours lectures and one hour computer laboratory per week for one semester.

Assessment
One assignment (3000 words, 20%); one test (1h each, 20% each) and final examination (3h, 60%).

RMS6200 PROJECT (BIOTECHNOLOGY)

Campus Werribee or Off-Campus in Industry

Pre-requisite(s) Successful completion of the first year of the SMBT degree or equivalent, with an average grade of H2A (Distinction) or above, including Research Methodology (RMS5100) and Project (Biotechnology) 1 (RMS6200), or equivalent. The offering of this unit is subject to availability of suitable projects and supervisors, as well as quality of academic performance of the student in the course to date.

Learning Outcomes
Upon completion of this unit, it is expected that students will be able to:
- Independently plan and carry out investigative laboratory experiments
- Objectively and critically analyse, discuss and report results obtained.

Coursework Students will propose and conduct an independent, practical, hands-on biotechnology project either industry-based or internally offered. Students undertaking this option will be expected to apply the knowledge and skills gained from the coursework component of SMBT degree to the project. The project will be a scientific investigation of an approved topic, consisting of a comprehensive literature review, project proposal, conduct of laboratory or computer-based research, critical analysis and interpretation of results, clear and concise communication of these and discussion followed by a conclusion. The student will be expected to comply with all regulations concerning Occupational Health and Safety (OH&S) and Good Laboratory Practice (GLP).

Required Reading

Recommended Reading

Class Contact
This unit will replace four electives in the existing Masters course. There are no contact hours in this unit as it is a entirely project-based. A total of 432 hours input will be expected for the unit, consisting of literature searches, proposal writing, laboratory research work and report-writing for the unit. This unit is worth 48 credit points (25%) of the course.

Assessment
Students will on all aspects of the project including literature review, aims of the proposal, experimental methods, results, critical evaluation of results and discussion, the length of which shall be in the range of 15,000 to 25,000 words (75%); appraisal and assessment from the supervisor of the oral & written communication and problem-solving skills of the student as well as the general conduct and performance in the project e.g. application, punctuality, compliance with OH&S regulations and adherence to GLP principles.
responses, essentials of the pathologic process of the common disorders with nutritional involvement, including; anaemia, alimentary dysfunction, cardiovascular disease, cancer, obesity, diabetes, inborn errors of metabolism, diagnostic and therapeutic modalities.

**Required Reading** Gould, BE. 1997. Pathophysiology for the Health Related Professions, Saunders, USA.


**Class Contact** Four hours per week comprising of lecture/tutorial/workshop for one semester.

**Assessment** Assignment, 40%; final examination, 60%.

**RHN3210 SPECIAL TOPICS IN NUTRITION, FOOD AND HEALTH SCIENCE**

**Campus** Werribee

**Prerequisites** RBF2750 Nutrition, or RBF2260 Diet and Nutrition, or equivalent, and RBF2210 Food Components or equivalent

**Content** To develop and study a selected aspect of nutrition and food science, requiring conduct of a project of a selected topic. Recent advances and controversies in selected topics of nutrition and food science, including: GMO’s, nutrition labelling, nutrient fortification, reference intake levels, nutrigenomics.

**Required Reading** Student will be responsible for reviewing current literature on their project topic.

**Class Contact** Nil, however, students are expected to spend at least three hours per week in the library.

**Assessment** Presentation 20%, report 80%.

**RPK6001 DEVELOPMENT OF PACKAGING SYSTEMS**

**Campus** Off shore (NVC, Gouda, the Netherlands)

**Prerequisites Nil.**

**Learning Outcomes** The student is able to:
- Set up a briefing for the development of a packaging system in cooperation with commercial departments or disciplines of the company.
- Manage the translation of a briefing from commercial departments to concepts of packaging systems.
- Involve all the aspects out of the total packaging chain (including product-related aspects, material choice, dimensioning, packaging process, distribution and warehousing, selling, product use and discarding of packaging as well as relevant legislation) in the development process and convert potential approaches into key deliverables to be implemented.
- Point out the most critical aspects in the development of the anticipated packaging system.
- Set up a functional specification of the packaging system to be developed.
- Estimate the costs of the concepts and to estimate the investment need.
- Manage the development process and split it up in the most effective and efficient manner.

**Content** The module consists of theories, overviews, calculations, cases and assignments, etc. The student will be provided with new theories as well with the application of formerly addressed theories. The content will address the following topics:
- Management of packaging development processes, involved disciplines and their activities, planning and control.
- The packaging chain, most relevant issues, trends and developments.
- Relevant legislation and the way to involve it into the development process.
- Tools to be used in the development process.
- Overview of principles of packaging equipment, accuracy, tooling, conditions, efficiency, etc.
- Steps, activities, pitfalls in development processes of packaging systems.


**Class Contact** 36 hours, equivalent to three hrs lecturing time per week for one semester. Normally to be delivered in block residential teaching modes.

**Assessment** Assignment: 50%; Presentation: 50%.

**RPK6002 MARKETING RESEARCH**

**Campus** Off shore (NVC, Gouda, the Netherlands)

**Prerequisites Nil.**

**Co-requisites** Nil.

**Learning Outcomes** The student is able to:
- Understand which market research techniques are suitable for packaging and packaging development.
- Write market research briefings.
- Review and evaluate a market research proposition.
- Examine, interpret, and translate results of marketing research to a development process.
- Stimulate correct use of marketing research for packaging.

**Content** The student is provided with the following concepts, theories, technologies and opinions, etc.:
- Goals and limitations of marketing research.
- Different market research techniques, such as qualitative and quantitative research, desk research, field research.
- Researching of cost level feasibility in the market.
- Product concept testing.
- In-home use testing.
- Nielsen-store.
- Association techniques.
- Multi-attribute modelling.
- etc.


**Class Contact** 27 hours, equivalent to 2 hrs lecturing time per week for 1 semester. Normally to be delivered in block residential teaching modes.

**Assessment** Written group assignment: 70% Group presentation: 30%

**RPK6003 COSTING METHODOLOGIES AND IMPACTS**

**Campus** Off shore (NVC, Gouda, the Netherlands)

**Prerequisites Nil.**

**Co-requisites** Nil.

**Learning Outcomes** The student is able to:
- Conduct both simple cost-calculations and interpret cost and costing.
- Comprehend the influence/effect of different methods of cost-calculation in decision processes.
- Differentiate and use the different accounting approaches and cost allocation methods.
- Understand the influence of the costs and cost parameters on decision processes.
- Understand and identify / apply the following concepts: fixed and variable costs, direct and indirect costs, differential, mean and integral cost.
- Understand and conduct a break-even analysis.

**Content** The subject provides insight in the following concepts, theories, technologies and opinions, etc.:
- Historic and standard costs.
- Methods of cost classification.
- Cash flow.
- Fixed and variable costs.
- Absorption and direct costing, actively based costing.
- Cost interpretation.
- Cost price calculation.

**Required Reading** Zimmerman, Jerry. (2003), Accounting for Decision Making and Control, fourth edition. Irwin/McGraw-Hill, Boston, USA. Hand-outs, literature (to be advised by lecturer)

**Recommended Reading** Nil.
Class Contact 18 hours, normally equivalent to 1.5 hrs lecturing time per week for 1 semester. Normally to be delivered in block residential teaching modes.
Assessment Written assignment: 50% Examination: 50 %.

RPK6004 INVESTMENT/CAPITAL ANALYSIS AND BUDGETING
Campus Off shore (NVC, Gouda, the Netherlands)
Prerequisites The subject ‘Costing methodologies and impacts’ is expected to have been studied (not necessarily successfully completed).
Co-requisites Nil.
Learning Outcomes The student: – Understands and is able to apply different methods of capital investment analysis: is able to recognise and evaluate investment opportunities and to interpret the results of these analyses.
• Judges whether the used discount rate adopted in these analyses is realistic.
• Defines and analyses cash flows.
• Applies and implements rating methodologies.
• Judges investment decisions.
• Comprehends the different concepts of investment.
Content The subject provides insight in a number of relevant investment concepts, theories, technologies and opinions, such as:
• Character of cash flow and cash flow analyses.
• Rating methodologies: Net Present Value, Break-even, Payback and discounted Payback Period, Average Return on Book Value of Accounting Rate of Return, Internal Rate of Return, Profitability Index of Present Value Ratio.
• Eight steps and four components of investment decisions.
• Methodologies for understanding insecurities and risks (such as Simulation and Scene-analyses).
• CAPM and WACC.
• Project risks and returns.
Recommended Reading Nil.
Class Contact 27 hours, equivalent to 2 hrs lecturing time per week for 1 semester. Normally to be delivered in block residential teaching modes.
Assessment Examination: 100%

RPK6005 QUALITY ASSURANCE AND MANAGEMENT
Campus Off shore (NVC, Gouda, the Netherlands)
Prerequisite(s) Nil.
Learning Outcomes The student:
• Understands the principle of the concept of quality applied at different levels (quality of product and services, quality of process and quality of organisations).
• Is able to translate these concepts to operational models, so that quality becomes a transparent and controllable aspect for all levels in the organisation.
• Can apply the standard quality circles to define, operate and control quality of products (packaging).
• Understands and is able to translate the concept of quality to operational levels, to improve the efficiency and effectiveness of these processes and to be able to control these processes with the most common methods.
• Is capable of defining elements of quality of the organisation in terms of ability of an organisation to fulfill the demands of all the stakeholders.
• Is able to apply the different models of quality management and quality improvement (such as EFQM model, ISO 9001:2000 series, Kaizen, Lean Enterprise, Six Sigma).
• Understands and is able to define responsibilities concerning quality of product, processes and organisation to the different levels of the organisation.
• Knows how to stimulate and motivate colleagues and employees to take their responsibility in making and improving quality.
• Is able to discuss and improve quality in the supply chain.
• Can successfully undertake a quality improvement project.
• Can prepare an organisation’s quality policy and deploy it in different forms at the different levels of the organisation. The students learn to motivate colleagues and employees to contribute to the improvement of quality of product and services, processes and the total organisation.
• Is able to be a partner for all the levels in the organisation, from shopfloor to top management.
• Understands the need for differentiating the form of quality management for the different levels in the organisation.
Content The following content will be delivered:
The concept of ‘quality’; Quality as an ability of products, processes and organisation to perform as necessary; Principles of quality management in the product realisation process (design, develop, produce); Quality management models (such as EFQM, ISO9001:2000); Quality improvement programs (such as Kaizen, Six Sigma); The most common methods and techniques to control and improve the quality of processes and organization; Quality management in the supply chain.
Class Contact 18 hours, 1.5 hrs lecturing time per week for one semester. Normally to be delivered in block residential teaching modes.
Assessment Case-study assignment: 100%.

RPK6006 OPERATIONAL STRATEGIES
Campus Off shore (NVC, Gouda, the Netherlands)
Prerequisites: Students have studied the following subjects: Development of Packaging Systems, Costing methodologies and impacts, Investment/ Capital Analysis and Budgeting, Business & Marketing Strategies
Co-requisites Nil.
Learning Outcomes The student:
• Recognises the strategic aspects of packaging processes.
• Understands and is able to work with the strategic design and change of value delivery systems, operational systems.
• Understands the impact of packaging processes and packaging process design on these operational strategies.
• Is able to translate this knowledge into operational strategy elements like strategic packaging procurement policies and supply chain (value delivery system) optimisation strategies.
N.B.: “Value Delivery System- consists of all people, processes, procedures, facilities, and machines that provide a group of products, services, or information to customers. It should be designed to deploy optimally the strategies of the business.” Source: Oklahoma University, Dr. Richard J. Tersine, Dr. Richard Hamilton, Missouri University, BCG, etc.)
Content The subject provides insight in the following concepts, theories, technologies and opinions, etc.:
• Strategic operational issues.
• Strategic operational decision areas.
• Horizontal and vertical concepts of integration.
• Ins and outs of make or buy decisions.
• Strategic matters of quality control.
• Continuous and discontinuous improvement processes.
• Competence building and competence management.
Recommended Reading Nil.
Class Contact 27 hours, normally equivalent to 3 hrs lecturing time per week for 1 semester. Normally to be delivered in block residential teaching modes.
Assessment Case study assignment: 100%.

RPK6007 BUSINESS AND MARKETING STRATEGY
Campus Off shore (NVC, Gouda, the Netherlands)
Prerequisites The student has studied the following subjects: Investment/ Capital Analyses and Budgeting, Marketing research.
Co-requisites Nil.
Learning Outcomes The student:
• Understands the influence of macro- meso- and micro- influences (i.e. macro-economical, supply chain, competition, culture and competence, etc) on marketing and business strategy.
• Understands and can apply classical marketing theories addressing marketing and business strategy.
• Is aware of the latest trends in marketing strategy.
• Can identify the effects of marketing strategy on the development of packaging and packaging strategy and vice versa.
Is able to translate marketing concepts into packaging aspects, questions and policy.
Is capable of preparing a simple marketing plan.
Can review a marketing plan and translates it into a tactical packaging approach.
Is able to effectively communicate with marketing managers and board members with respect to the importance of a packaging strategy in relation to marketing and business strategies.

Content The following content (theory, content, discussion, cases) will be delivered:
• Trends in external environment on macro- and meso-level.
• Models of Porter and Kottler.
• Operational, tactical and strategic planning.
• SWOT-analysis, GAP-analysis.
• Key-inputs.
• Port folio-analysis including product-life-cycle influences.
• Competition vs. “the rules of the game”.
• Needs analysis.


Recommended Reading Nil.

Class Contact 27 hours, equivalent to 2 hrs lecturing time per week for 1 semester. Normally to be delivered in block residential teaching modes.
Assessment Written assignment: 100%
Course Structure

The course is 4 semesters in length, and is offered to full-time students over two years. Students undertaking a part-time load, which is possible under certain circumstances, would normally complete the course in a maximum of 8 semesters or four years. Any part-time load is negotiated between the student and the Course Coordinator.

Apart from the clinical practicum units of study, all units of study are currently offered in an ‘on campus’ mode, however there are on-line components to some units of study. In the future more use may be made of this teaching medium with some units of study being offered in ‘off campus’ or ‘mixed’ mode.

Admission Requirements Prerequisites

To qualify for admission to this course applicants must have:
- current registration as a Division 2 Registered Nurse (or eligibility for registration) with the Nurses Board of Victoria.
- satisfactory completion of recognised study in health assessment and tertiary study skills, human bioscience and psychology.

For students who have not completed the appropriate recognised study as mentioned above, a bridging program is available prior to commencement of the course in order to meet the above prerequisites. The program is offered in January/February each year and will consist of the following units of study:
- Introduction to Health Assessment;
- Human Bioscience;
- Psychology.

The school has a Recognition of Prior Learning Committee, which, under the School’s Operational Guidelines, oversees this process and develops guidelines or policy (in accordance with Faculty and University policies) where this is needed.

Selection mode

Applicants will be required to apply through VTAC and will receive an offer, conditional upon meeting the prerequisites.

Aborigines and Torres Strait Islanders

Persons of Aboriginal or Torres Strait Islander descent are encouraged to apply for admission. Applicants will be assessed on an individual basis to determine the suitability and potential for success in the course.

Entry as a Disadvantaged Person

Applicants who consider that their capacity to qualify under normal entry provisions has been limited by some disadvantage, for example, illness, disability, economic hardship, isolation or English language learning difficulties, may apply to be considered as a disadvantaged person.

Applicants who consider that their capacity to qualify under normal entry provisions has been limited by some disadvantage, for example, illness, economic hardship, isolation or English language learning difficulties, may apply to be considered as a disadvantaged person. Applicants will be assessed on an individual basis to determine the suitability and potential for success in the course.

Course Structure

<table>
<thead>
<tr>
<th>Year 1, Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2132 NURSING THEORY 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB1115 HEALTHCARE LAW AND ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3101 RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2127 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS A</td>
<td>8</td>
<td>0.0833</td>
<td>0</td>
<td>$340</td>
<td>$340</td>
<td>$953</td>
</tr>
<tr>
<td>RMB2110 HUMAN BIOSCIENCE 3</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1, Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2241 NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2234 CLINICAL PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2227 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS B</td>
<td>8</td>
<td>0.0833</td>
<td>0</td>
<td>$340</td>
<td>$340</td>
<td>$953</td>
</tr>
<tr>
<td>HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>RMB2210 HUMAN BIOSCIENCE 4</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2, Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3236 TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3100 PHARMACOLOGY IN NURSING PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3108 NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3105 NURSING THEORY 7 – ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3109 CLINICAL PRACTICUM 7: COORDINATED CARE</td>
<td>16</td>
<td>0.1667</td>
<td>0</td>
<td>$680</td>
<td>$680</td>
<td>$1,906</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2, Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3107 HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**BACHELOR OF NURSING (GRADUATE ENTRY) (I)**

**Course Code:** HBGE

**Course Objectives**

The Course aims to provide students with the following attributes:

- a sound knowledge of the theory and practice of nursing;
- an understanding and appreciation of health and illness as it is influenced by a variety of political, social, psychological, economic, cultural, and biological factors;
- a broad range of clinical practice skills that can be used to provide care to individuals, families, and communities within the context of the promotion of health, the prevention of ill health, the management of ill health, and attempts to promote recovery from ill health;
- comprehension nursing skills that will lead to employment and beginning practice in a broad range of health care settings;
- an ability to practice independently, in an ethical and professional manner and collaboratively in multidisciplinary settings;
- an ability institutional and social change in health care settings;
- locate, evaluate, manage and use information technology effectively.

**Course Duration**

This course will be offered full-time over two years.

**Admission Requirements**

To qualify for admission to this course applicants must be graduates of other degree programs and must have satisfactory completion of recognised graduate study in Introduction to Nursing, Human Bioscience and Psychology.

For students who have not completed the appropriate higher degree study, a bridging program is available prior to commencement of the course in order to meet the above prerequisites. The program is offered in January – February each year and will consist of the following Units of Study:

- Introduction to Nursing Studies;
- Human Bioscience;
- Psychology.

**Course Structure**

<table>
<thead>
<tr>
<th>Year 1, Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2132 NURSING THEORY 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2135 NURSING PRACTICE 3: HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2136 CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2127 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS A</td>
<td>8</td>
<td>0.0833</td>
<td>0</td>
<td>$340 $340</td>
<td>$953</td>
</tr>
<tr>
<td>RBM2110 HUMAN BIOSCIENCE 3</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484 $605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1, Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2241 NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2234 CLINICAL PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2227 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS B</td>
<td>8</td>
<td>0.0833</td>
<td>0</td>
<td>$340 $340</td>
<td>$953</td>
</tr>
<tr>
<td>HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681 $681</td>
<td>$1,910</td>
</tr>
<tr>
<td>RBM2210 HUMAN BIOSCIENCE 4</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484 $605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2, Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB1114 HEALTHCARE INFORMATICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3100 PHARMACOLOGY IN NURSING PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3108 NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3105 NURSING THEORY 7 – ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3109 CLINICAL PRACTICUM 7: COORDINATED CARE</td>
<td>16</td>
<td>0.1667</td>
<td>0</td>
<td>$680 $680</td>
<td>$1,906</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2, Semester 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3107 HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>Nursing Theory 8: Electives (Choose one)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3251 NURSING THEORY 8: (ELECTIVE) ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3202 NURSING THEORY 8: (ELECTIVE) MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
</tr>
</tbody>
</table>
### BACHELOR OF NURSING (GRADUATE ENTRY)

#### Course Code: HBGN

**Course Objectives**

The Course aims to provide students with the following attributes:

- a sound knowledge of the theory and practice of nursing;
- an understanding and appreciation of health and illness as it is influenced by a variety of political, social, psychological, economic, cultural, and biological factors;
- a broad range of clinical practice skills that can be used to provide care to individuals, families, and communities within the context of the promotion of health, the prevention of ill health, the management of ill health, and attempts to promote recovery from ill health;
- comprehension nursing skills that will lead to employment and beginning practice in a broad range of health care settings;
- an ability to practice independently, in an ethical and professional manner and collaboratively in multidisciplinary settings;
- an ability to institutional and social change in health care settings;
- locate, evaluate, manage and use information technology effectively.

#### Course Duration

This course will be offered full-time over two years.

#### Admission Requirements

To qualify for admission to this course applicants must be graduates of other degree programs and must have satisfactory completion of recognised graduate study in Introduction to Nursing, Human Bioscience and Psychology.

For students who have not completed the appropriate higher degree study, a bridging program is available prior to commencement of the course in order to meet the above prerequisites. The program is offered in January – February each year and will consist of the following Units of Study:

- Introduction to Nursing Studies;
- Human Bioscience;
- Psychology.

#### Course Structure

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Credit</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3236 TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB33101 RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3136 NURSING PRACTICE 7 MENTAL HEALTH AND ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3137 CLINICAL PRACTICUM 7: MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3103 NURSING PRACTICE 6: CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3104</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Four</th>
<th>Credit</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3107 HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Nursing Practice 8: Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3271 NURSING PRACTICE 8 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3272 NURSING PRACTICE 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3247 NURSING PRACTICE 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3273 NURSING PRACTICE 8 HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Clinical Practicum 8: Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3274 CLINICAL PRACTICUM 8 ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3275 CLINICAL PRACTICUM 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3276 CLINICAL PRACTICUM 8 HEALTH &amp; ILLNESS OLDER ADULTS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>Consolidation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3250 CLINICAL PRACTICUM 9: CONSOLIDATION</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>
BACHELOR OF NURSING (PRE-REGISTRATION) (MENTAL HEALTH MAJOR)
Course Code: HBMH

Course Objectives
The aims of the course are to:
• prepare competent beginning nurse practitioners who are eligible and able to practice in a variety of health care settings with a particular focus on mental health nursing;
• provide an education which contributes to the student's personal, professional, and intellectual growth;
• prepare students in ways to help them begin to deal with the world of work with its attendant uncertainties, ambiguities, conflicts and change.
• prepare students who can participate effectively in a teamwork approach; and
• enable graduates to register professionally as Division 1 nurses with the Nurses Board of Victoria

Course Duration
The course is offered over three years on a full-time or part-time equivalent.

Admission Requirements
To qualify for admission to the course applicants must have successfully completed the Victorian Certificate of Education (VCE) including Units 3 and 4 with a study score of at least 25 in English any and study score of at least 20 in one of biology, chemistry, health and human development, physics, psychology or mathematics (any combination).

Course Structure

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB1113 FOUNDATIONS IN PROFESSIONAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$510</td>
<td>$510</td>
<td>$1,429</td>
</tr>
<tr>
<td>HNB1114 HEALTHCARE INFORMATICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>RBM1519 HUMAN BIOSCIENCE 1: BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
</tr>
<tr>
<td>APT1311 PSYCHOLOGY ACROSS THE LIFESPAN</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>HNB1115 HEALTHCARE LAW AND ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB1230 NURSING THEORY 1: ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB1233 CLINICAL PRACTICUM 1: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>ASET1320 SOCIOLOGY OF INDIGENOUS HEALTH</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3101 RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>RBM1530 HUMAN BIOSCIENCE 2 BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB2132 NURSING THEORY 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2136 CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2138 NURSING THEORY 3 HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2127 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS A</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
<tr>
<td>RBM2110 HUMAN BIOSCIENCE 3</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB2241 NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2234 CLINICAL PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2227 NURSING THEORY 5: MENTAL HEALTH AND ILLNESS B</td>
<td>8</td>
<td>0.0833</td>
<td>0</td>
<td>$340</td>
<td>$340</td>
<td>$953</td>
</tr>
<tr>
<td>HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>RBM2210 HUMAN BIOSCIENCE 4</td>
<td>8</td>
<td>0.0833</td>
<td>2</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3236 TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3100 PHARMACOLOGY IN NURSING PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3108 NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3105 NURSING THEORY 7 – ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3109 CLINICAL PRACTICUM 7: COORDINATED CARE</td>
<td>16</td>
<td>0.1667</td>
<td>0</td>
<td>$680</td>
<td>$680</td>
<td>$1,906</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3107 HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3215 NURSING THEORY 8: MENTAL HEALTH NURSING</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3216 CLINICAL PRACTICUM 8: MENTAL HEALTH NURSING</td>
<td>32</td>
<td>0.3330</td>
<td>0</td>
<td>$1,358</td>
<td>$1,358</td>
<td>$3,808</td>
</tr>
</tbody>
</table>

BACHELOR OF MIDWIFERY
Course Code: HBMI

Course Structure
(Continuing students only)

<table>
<thead>
<tr>
<th>Year Two</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMM2010 PRACTICE ALLEGIANCES</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>JAC0216 WITH WOMAN: RETHINKING PAIN (CONSORTIUM SUBJECT)</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>JAC0217 UNPACKING MIDWIFERY KNOWLEDGE (CONSORTIUM SUBJECT)</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNB2137 ETHICS AND LEGAL STUDIES</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>
SCHOOL OF NURSING AND MIDWIFERY

Course Code: HBNW

(Subject to approval by the Nurses Board of Victoria)

Course Objectives
The course aims to prepare midwives who will be able to:
- practice competently and confidently in a variety of maternity settings;
- demonstrate practice which is evidence-informed, according to the ACMI Competency Standards for Midwives (2001);
- reflect attitudes which are congruent with the philosophy of valuing women, women-centred care, and woman-midwife partnership;
- work both as a primary carer and in collaboration with other healthcare professionals in providing comprehensive care through women's reproductive life; and
- achieve employment in a variety of maternity care settings.

Admission Requirements
To qualify for admission to the course, an applicant must have successfully completed the Victorian Certificate of Education (VCE), with Units 1 and 2 Maths (any); Units 3 and 4 English and a study score of at least 20; Units 3 and 4 of at least one of the following: Biology, Chemistry, Health Education, Psychology, Human Development, Physics, or Maths (any).

Applicants who do not meet the normal admission requirements but who possess appropriate educational qualifications, work or life experiences which would enable them to successfully undertake the course, will be considered for admission.

Course Regulations
The following should be read in conjunction with the faculty regulations detailed earlier in this Handbook, and the University Statutes and Regulations.

Practical Placement
Students should note that they will be subject to safety screening (Police checks) before placement in accordance with Department of Human Services policy (March 2000). Students may also be asked to declare their immunization status to satisfy the requirements of the hospital/agency at which they will be placed.

Students' progress towards competency is gauged against the expected minimum competency rating for each semester of the course. Absence from practice placement may affect a student's ability to demonstrate the expected level of competency. Students who have been absent from practice experience during semester, are required to provide appropriate documentation (eg medical certificate or a statutory declaration) to account for their absence.

The provision of make-up time is at the discretion of the School and students should not assume that it is an automatic right. At the discretion of the School additional midwifery practice may be negotiated within a maximum stated time frame to attain competency. Students who do not provide documentary evidence or do not attend the arranged additional practice hours will incur a 'fail' grade and will be required to repeat the relevant Midwifery subjects.

Academic Progression

Unsatisfactory progress
Students will be deemed to have made unsatisfactory progress if they fail to complete the course in six calendar years (on full-time basis). Each sequential stage of the course must be completed before progression to a subsequent stage.

Course Duration
The course is offered over three years on a full-time basis.

Course Structure
(Year 1 only commencing in 2006)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1515 ANATOMY AND PHYSIOLOGY 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$482</td>
<td>$603</td>
<td>$1,052</td>
<td></td>
</tr>
<tr>
<td>APT1310 PSYCHOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>HNM7113 FOUNDATIONS IN MIDWIFERY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$510</td>
<td>$510</td>
<td>$1,429</td>
<td></td>
</tr>
<tr>
<td>HNM7115 MIDWIFERY STUDIES 1: THE CHILDBEARING JOURNEY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNM7114 CONTINUITY OF CARE 1</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 Fee (AUS)</td>
<td>2005 Fee (AUS)</td>
<td>Full Fee (AUS)</td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>-------</td>
<td>---------</td>
<td>-------------------</td>
<td>----------------</td>
<td>----------------</td>
<td></td>
</tr>
<tr>
<td>HNB1115</td>
<td>HEALTHCARE LAW AND ETHICS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM2528</td>
<td>PATHOPHYSIOLOGY IN MIDWIFERY</td>
<td>0.0830</td>
<td>2</td>
<td>$482 $603</td>
<td>$1,052</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7203</td>
<td>MIDWIFERY STUDIES 3: CHILDREARING COMPLICATIONS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7204</td>
<td>MIDWIFERY PRACTICE 3: CHILDREARING COMPLICATIONS</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019 $1,019</td>
<td>$2,859</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3237</td>
<td>RESEARCH FOR PRACTICE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7205</td>
<td>MIDWIVES WRKG WITH WOMEN FROM DIV BCKGRD</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7226</td>
<td>MIDWIFERY STUDIES 4 WOMENS HEALTH</td>
<td>0.1670</td>
<td>0</td>
<td>$681 $681</td>
<td>$1,910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7227</td>
<td>MIDWIFERY PRACTICE 4</td>
<td>0.1670</td>
<td>0</td>
<td>$681 $681</td>
<td>$1,910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7208</td>
<td>CONTINUITY OF CARE TWO</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB7309</td>
<td>APPLIED MEDICATION MANAGEMENT</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7310</td>
<td>MIDWIFERY STUDIES 5 CHILDREARING COMPLICATIONS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7311</td>
<td>MIDWIFE PRAC 5 CHILDREARING COMPLICATION</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019 $1,019</td>
<td>$2,859</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7312</td>
<td>CONTINUITY OF CARE THREE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7313</td>
<td>MIDWIFERY STUD 6-BABIES NEED EXTRA CARE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7314</td>
<td>MIDWIFERY PRAC 6-BABIES NEED EXTRA CARE</td>
<td>0.1670</td>
<td>0</td>
<td>$681 $681</td>
<td>$1,910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7315</td>
<td>MIDWIFERY PRACTICE 7 CONSOLIDATION</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019 $1,019</td>
<td>$2,859</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For theoretical subjects 1 credit point = 7 hours approximately
For clinical subjects 1 credit point = 10 hours approximately but varies according to NBV requirements.

**BACHELOR OF NURSING (PRE-REGISTRATION)**

**Course Code:** HBRN

**Course Objectives**

The aims of the course are to:

- prepare competent beginning nurse practitioners who are eligible and able to practice in a variety of health care settings;
- provide an education which contributes to the student's personal, professional, and intellectual growth;
- prepare students in ways to help them begin to deal with the world of work with its attendant uncertainties, ambiguities, conflicts and change.
- prepare students who can participate effectively in a teamwork approach; and
- enable graduates to register professionally as Division 1 nurses with the Nurses Board of Victoria

**Course Duration**

The course is offered over three years on a full-time or part-time equivalent.

**Admission Requirements**

To qualify for admission to the course applicants must have successfully completed the Victorian Certificate of Education (VCE) including Units 3 and 4 with a study score of at least 25 in English any and study score of at least 20 in one of biology, chemistry, health and human development, physics, psychology or mathematics (any combination).

Applicants who do not meet the normal admission requirements but who process appropriate educational qualifications, work or life experiences which would enable them to successfully undertake the course, will be considered for admission.

**Course Structure**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AUS)</th>
<th>2005 Fee (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB1113</td>
<td>FOUNDATIONS IN PROFESSIONAL PRACTICE</td>
<td>0.1250</td>
<td>0</td>
<td>$510 $510</td>
<td>$1,429</td>
<td></td>
</tr>
<tr>
<td>HNB1114</td>
<td>HEALTHCARE INFORMATICS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>RBM1519</td>
<td>HUMAN BIOSCIENCE 1: BODY STRUCTURE &amp; FUNCTION</td>
<td>0.0830</td>
<td>2</td>
<td>$482 $603</td>
<td>$1,052</td>
<td></td>
</tr>
<tr>
<td>APT1311</td>
<td>PSYCHOLOGY ACROSS THE LIFESPAN</td>
<td>0.1250</td>
<td>1</td>
<td>$510 $637</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>HNB1115</td>
<td>HEALTHCARE LAW AND ETHICS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB1230</td>
<td>NURSING THEORY 1 : ACUTE CARE</td>
<td>0.1670</td>
<td>0</td>
<td>$681 $681</td>
<td>$1,910</td>
<td></td>
</tr>
<tr>
<td>HNB1233</td>
<td>CLINICAL PRACTICUM 1: ACUTE CARE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>ASET1230</td>
<td>SOCIOLOGY OF INDIGENOUS HEALTH</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB3101</td>
<td>RESEARCH FOR PRACTICE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>RBM1530</td>
<td>HUMAN BIOSCIENCE 2 BODY STRUCTURE &amp; FUNCTION</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Fee (AUS)</th>
<th>2005 Fee (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2132</td>
<td>NURSING THEORY 2: ACUTE CARE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2134</td>
<td>CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2136</td>
<td>CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2138</td>
<td>NURSING THEORY 3 HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>0.0830</td>
<td>0</td>
<td>$338 $338</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2127</td>
<td>NURSING THEORY 5: MENTAL HEALTH AND ILLNESS A</td>
<td>0.0833</td>
<td>0</td>
<td>$340 $340</td>
<td>$953</td>
<td></td>
</tr>
<tr>
<td>RBM2110</td>
<td>HUMAN BIOSCIENCE 3</td>
<td>0.0833</td>
<td>2</td>
<td>$484 $605</td>
<td>$1,055</td>
<td></td>
</tr>
</tbody>
</table>
## SCHOOL OF NURSING AND MIDWIFERY

### Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB2241</td>
<td>NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2234</td>
<td>CLINICAL PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB2227</td>
<td>NURSING THEORY 5: MENTAL HEALTH AND ILLNESS B</td>
<td>8</td>
<td>0.0833</td>
<td>$340</td>
<td>$340</td>
<td>$953</td>
</tr>
<tr>
<td>HNB2239</td>
<td>CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>RBM2210</td>
<td>HUMAN BIOSCIENCE 4</td>
<td>8</td>
<td>0.0833</td>
<td>$484</td>
<td>$605</td>
<td>$1,055</td>
</tr>
</tbody>
</table>

### Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3236</td>
<td>TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3100</td>
<td>PHARMACOLOGY IN NURSING PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3108</td>
<td>NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3105</td>
<td>NURSING THEORY 7 – ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3109</td>
<td>CLINICAL PRACTICUM 7: COORDINATED CARE</td>
<td>16</td>
<td>0.1667</td>
<td>$680</td>
<td>$680</td>
<td>$1,906</td>
</tr>
</tbody>
</table>

### Year 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3107</td>
<td>HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3251</td>
<td>NURSING THEORY 8: (ELECTIVE) ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3202</td>
<td>NURSING THEORY 8: (ELECTIVE) MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3204</td>
<td>NURSING THEORY 8: (ELECTIVE) CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3201</td>
<td>NURSING THEORY 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>

### Clinical Practicum 8: Electives Choose one

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3252</td>
<td>CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3230</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3248</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3249</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

### Consolidation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3250</td>
<td>CLINICAL PRACTICUM 9: CONSOLIDATION</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

### BACHELOR OF NURSING (PRE-REGISTRATION)

#### Course Code: HBUN

(Continuing Students Only)

### Year Three

#### Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3236</td>
<td>TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3101</td>
<td>RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3103</td>
<td>NURSING PRACTICE 6: CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3104</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3136</td>
<td>NURSING PRACTICE 7 MENTAL HLTH AND ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3137</td>
<td>CLINICAL PRACTICUM 7: MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>

#### Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3107</td>
<td>HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3271</td>
<td>NURSING PRACTICE 8 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3272</td>
<td>NURSING PRACTICE 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3247</td>
<td>NURSING PRACTICE 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3273</td>
<td>NURSING PRACTICE 8 HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
</tbody>
</table>

#### Clinical Practicum 8: Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3274</td>
<td>CLINICAL PRACTICUM 8 ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3275</td>
<td>CLINICAL PRACTICUM 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3248</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3276</td>
<td>CLINICAL PRACTICUM 8 HEALTH &amp; ILLNESS OLDER ADULTS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

#### Consolidation

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3250</td>
<td>CLINICAL PRACTICUM 9: CONSOLIDATION</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

### Career Prospects

Career opportunities for Division 1 Registered Nurses are available in clinical practice, clinical management, education and research areas. Nurses are able to practice in a range of settings including hospitals community and mental health agencies, aged care and health care industries.

### Course Regulations

The following should be read in conjunction with the Faculty Regulations detailed earlier in this Handbook, and the University Statutes and Regulations.

### Clinical Placement

Students should note that they will be subject to safety screening (Victoria Police) checks before placement, in accordance with Department of Human Services policy. Students will also be asked to declare their immunisation status to satisfy the requirements of the hospital/agency at which they will be placed.
Clinical Makeup
Students who have been absent from clinical experience during semester, are required to provide appropriate documentation (e.g. medical certificate or a statutory declaration) to account for their absence. Absence from clinical placement may affect a student’s ability to demonstrate an acceptable level of competency. Students will be rated as ‘incomplete’ if documentary evidence for their absence can be provided. Further clinical learning and assessment may be offered to replace the day/s of absence. The provision of make-up time is at the discretion of the School and students should not assume that it is an automatic right. Students who do not provide documentary evidence or do not attend the arranged clinical make-up will incur a ‘fail’ or ‘unacceptable’ grade and will be required to repeat the relevant Nursing subject.

BACHELOR OF NURSING (DIVISION 2 ENTRY)
For continuing students only
Course Code: HBVN

<table>
<thead>
<tr>
<th>Semester Three</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB3236 TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3101 RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3136 NURS PRACTICE 7 MENTAL HLTH AND ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3137 CLINICAL PRACTICUM 7: MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3103 NURSING PRACTICE 6: CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Semester Four</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3107 HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Nursing Practice 8: Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3271 NURSING PRACTICE 8 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3272 NURSING PRACTICE 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3247 NURSING PRACTICE 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>HNB3273 NURSING PRACTICE 8 HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$338</td>
<td>$338</td>
<td>$949</td>
</tr>
<tr>
<td>Clinical Practicum 8: Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3274 CLINICAL PRACTICUM 8 ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3275 CLINICAL PRACTICUM 8 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNB3276 CLINICAL PRACTICUM 8 HEALTH &amp; ILLNESS OLDER ADULTS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>Consolidation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3250 CLINICAL PRACTICUM 9: CONSOLIDATION</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

Career Prospects
Career opportunities for Division 1 Registered Nurses are available in clinical practice, clinical management, education and research areas. Nurses are able to practice in a range of settings including hospitals community and mental health agencies, aged care and health care industries.

Course Regulations
The following should be read in conjunction with the Faculty Regulations detailed earlier in this Handbook, and the University Statutes and Regulations.

Clinical Placement
Students should note that they will be subject to safety screening (Victoria Police) checks before placement, in accordance with Department of Human Services policy. Students will also be asked to declare their immunisation status to satisfy the requirements of the hospital/agency at which they will be placed.

Clinical Makeup
Students who have been absent from clinical experience during semester, are required to provide appropriate documentation (e.g. medical certificate or a statutory declaration) to account for their absence. Absence from clinical placement may affect a student's ability to demonstrate an acceptable level of competency. Students will be rated as ‘incomplete’ if documentary evidence for their absence can be provided. Further clinical learning and assessment may be offered to replace the day/s of absence. The provision of make-up time is at the discretion of the School and students should not assume that it is an automatic right. Students who do not provide documentary evidence or do not attend the arranged clinical make-up will incur a 'fail' or 'unacceptable' grade and will be required to repeat the relevant Nursing subject.

BACHELOR OF HEALTH SCIENCE (HONOURS) - NURSING (I)
Course Code: HHNO

Course Objectives
The aims of the course are to enable graduates to:

- demonstrate advanced knowledge and specialised skill in the selection, application and integration of qualitative research methods to generate, test and extend theory;
- assess how the concepts of causality, correlation and probability impact on choice of scientific design derived from the classic experimental model;
- recognise the relationship between a research problem and research design;
- examine a variety of philosophical positions and be able to determine their contribution to nursing's epistemology; and
- facilitate professional ethical and moral development in practice and research.

Admission Requirements
To qualify for admission to the course applicants must:

- have satisfactorily completed a bachelor degree in nursing with a grade average of Credit (C) or higher throughout the course; and
- be eligible for registration as a Division 1 Nurse with the Nurses Board of Victoria.
Applicants who do not meet the normal entry requirements will be considered for entry if they meet the following criteria:

- satisfactory completion of a one-year post-registration degree in nursing with a grade average of Credit (C) or higher throughout the course; and
- eligibility for registration as a Division 1 or Division 3 Nurse with the Nurses Board of Victoria; or
- satisfactory completion of a bachelor degree in a discipline other than nursing with a grade average of Credit (C) or higher throughout the course; and
- eligibility for registration as a Division 1 or Division 3 Nurse with the Nurses Board of Victoria.

**Course Duration**
The duration of the course is offered over one year on a full-time basis or part-time equivalent.

**Course Structure**
Students are required to study three specified subjects and to complete a minor thesis within two semesters of full-time study (or the part-time equivalent). The structure of the course permits some flexibility in that all four subjects of one-semester duration, may be taken in any order and do not have any prerequisite or Corequisite requirements.

In order to be awarded a Bachelor of Health Science (Honours) – Nursing students must complete all subjects with Honours H3 or above.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNH4101 - INTRODUCTION TO RESEARCH DESIGN AND METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNH4102 - ADVANCED QUANTITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNH4103 - ADVANCED QUALITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNH4200 - MINOR THESIS (FULL TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>$2,039</td>
<td>$2,039</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNH4201 - MINOR THESIS (PART TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>HNH4201 - MINOR THESIS (PART TIME) x 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BACHELOR OF HEALTH SCIENCE (HONOURS) – NURSING
Course Code: HHHU

**Course Objectives**
The aims of the course are to enable graduates to:

- demonstrate advanced knowledge and specialised skill in the selection, application and integration of qualitative research methods to generate, test and extend theory;
- assess how the concepts of causality, correlation and probability impact on choice of scientific design derived from the classic experimental model;
- recognise the relationship between a research problem and research design;
- examine a variety of philosophical positions and be able to determine their contribution to nursing’s epistemology; and
- facilitate professional ethical and moral development in practice and research.

**Admission Requirements**
To qualify for admission to the course applicants must:

- have satisfactorily completed a bachelor degree in nursing with a grade average of Credit (C) or higher throughout the course; and
- be eligible for registration as a Division 1 Nurse with the Nurses Board of Victoria.

Applicants who do not meet the normal entry requirements will be considered for entry if they meet the following criteria:

- satisfactory completion of a one-year post-registration degree in nursing with a grade average of Credit (C) or higher throughout the course; and
- eligibility for registration as a Division 1 or Division 3 Nurse with the Nurses Board of Victoria; or
- satisfactory completion of a bachelor degree in a discipline other than nursing with a grade average of Credit (C) or higher throughout the course; and
- eligibility for registration as a Division 1 or Division 3 Nurse with the Nurses Board of Victoria.

**Course Duration**
The duration of the course is offered over one year on a full-time basis or part-time equivalent.

**Course Structure**
Students are required to study three specified subjects and to complete a minor thesis within two semesters of full-time study (or the part-time equivalent). The structure of the course permits some flexibility in that all four subjects of one-semester duration, may be taken in any order and do not have any prerequisite or Corequisite requirements.

In order to be awarded a Bachelor of Health Science (Honours) – Nursing students must complete all subjects with Honours H3 or above.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2000 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNH4312 - MINOR THESIS A</td>
<td>16</td>
<td>0.1670</td>
<td>$681</td>
<td>$681</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNH4314 - MINOR THESIS B (FULL-TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>$2,039</td>
<td>$2,039</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNH4313 - MINOR THESIS B (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>HFR0001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFR0002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MASTER OF NURSING
Course Code: HMPN

Incorporating -
Graduate Certificates and Graduate Diplomas in

- Cancer Nursing
- Emergency Nursing
- Gerontic Nursing
- Neuroscience Nursing
- Orthopaedic Nursing
- Paediatric Nursing
Course Objectives
The Master of Nursing has been developed for nursing graduates who wish to undertake studies in clinical speciality areas of nursing within a range of health care settings, with specific aims to:

- produce nurse specialists with expertise in their area of specialty with diagnostic and decision making skills to solve complex patient care problems in the work environment;
- produce nurse professionals with skills to investigate, challenge and develop current practices;
- develop skills to analyse and critique contemporary theories that inform practice;
- enhance students’ ability to analyse social and political dynamics within the current health care environment;
- produce nurse professionals who not only adapt to the changing needs within the health care environment, but who will also engage in political processes to facilitate institutional and social change;
- develop skills to form collaborative relationships with agencies and other health care professionals; and
- provide the opportunity for students to develop a knowledge of self and explore a range of world views.

Admission Requirements
To qualify for admission to the course applicants must normally:

- hold an undergraduate degree in Nursing or equivalent; and
- be registered with the Nurses Board of Victoria as a Division 1 Nurse; and
- be working in the area of specialisation at the time of application.

Applicants who do not meet the normal admission requirements will be considered if they are eligible for registration as a Division 1 Nurse with the Nurses Board of Victoria; have relevant professional experience in Nursing, as approved by the School; and meet such other requirements as are perceived appropriate by the School. These requirements may include the completion of selected nursing and/or other subjects from the undergraduate degree program, or a preparation for study program.

Course Duration
The Master of Nursing is offered over three semesters on a full-time basis or part-time equivalent.

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee
(AU$) (AU$) (AU$)

Master of Nursing (Full Time/Part Time)
Core Units of Study
HNG5001 ISSUES AND POLICIES IN PROFESSIONAL PRACTICE 16 0.1670 0 $681 $681 $1,910

Coursework Stream
HNM6118 EVIDENCE BASED PRACTICE IN SPECIALISED NURSING 16 0.1670 0 $681 $681 $1,910
HNM6119 LEADERSHIP AND MANAGEMENT IN SPECIALISED NURSING 16 0.1670 0 $681 $681 $1,910
HNM6029 CLINICAL SPECIALISED PROJECT 32 0.3330 0 $1,358 $1,358 $3,808
HHA6115 MINOR THESIS (FULL TIME) 48 0.5000 0 $2,039 $2,039 $5,718
OR
HHA6116 MINOR THESIS (PART TIME) 24 0.2500 0 $1,019 $1,019 $2,859

Minor Thesis Stream
HFR0001
HFR0002

Specialisations – Level 3
HNO5003 ORTHOPAEDIC NURSING STUDIES 3 16 0.1670 0 $681 $681 $1,910
HNP5003 PAEDIATRIC NURSING STUDIES 3 16 0.1670 0 $681 $681 $1,910
HNM5006 NURSING MANAGEMENT 3 16 0.1670 0 $681 $681 $1,910
EXIT WITH MASTER OF NURSING

MASTER OF NURSING (BY RESEARCH)
Course Code: HRNR

Course Objectives
The Master of Nursing (by Research) is offered to students who have demonstrated the ability to undertake extensive study and research in a focused area of nursing. Although expected to demonstrate a high degree of independence, the student works under the guidance of a qualified and experienced supervisor. While the successful completion of this qualification depends entirely upon the examination of the thesis, the School of Nursing also places great emphasis on the development of research skills and background knowledge deemed necessary for successful completion of the research project.

Areas of Specialisation
Staff within the School will supervise research in a number of areas of specialisation including:

- acute care nursing;
- community health nursing;
- mental health;
- midwifery;
- neuroscience nursing;
- nursing education;
- nursing theory and clinical practice;
- ontology and epistemology of caring;
- professional nursing issues;
- substance abuse;
- women’s health.

These areas of study are not exhaustive and applicants are advised to contact the School directly to discuss their proposed area of study.
Course Duration
Completion of the Master of Nursing (by Research) normally requires two years of full-time study or part-time equivalent.

Course structure

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM6800 RESEARCH THESIS (FULL-TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>0</td>
<td>$2,039</td>
<td>$2,039</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNM6801 RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
</tbody>
</table>

Admission Requirements
To qualify for admission to the Master of Nursing applicants must hold an undergraduate degree in nursing or equivalent. Some students may be required to undertake additional studies in specific areas, for example advanced research subjects.

Degree Requirements
In order to be awarded the Master in Nursing (by Research) students must undertake an appropriate research design subject, or any other subject, as required by the School; have their candidature approved by the Faculty; and successfully complete a thesis undertaken with appropriate supervision.
Below are subject details for courses offered by the School of Nursing And Midwifery in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

**HHA6115 MINOR THESIS (FULL TIME)**

**Campus** St Albans  
**Prerequisites** Nil  
**Co-requisites** Nil

**Learning Outcomes**  
At the completion of the subject, student should be able to:
- Independently conduct research that demonstrates the ability to define a problem to undertake a detailed literature search and review the relevant theoretical and practical implications on the topic area;
- Develop a research design and methodology to apply it to an appropriate pure or applied problem;
- Develop a set of research questions, and perform scholarly research tasks;
- Develop data collection tools including collection strategies and analysis skills;
- Develop a scholarly written thesis that demonstrates high levels of analytical and written communication skills.

**Content**  
The minor thesis is intended to provide students with an opportunity to undertake independent inquiry into an area of personal interest and applicable to their professional development. The thesis will be a research paper of not less than 15,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates the student’s ability to clearly define a research question, and to undertake a critical review of the relevant literature. Data selection, collection and analysis skills should also be demonstrated. The thesis should allow the candidate to utilise a methodology applicable to a research question. It is expected that the student will attend sessions on quantitative or qualitative research methods depending on the approach they intend to use in their approach to the topic chosen. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduct of the research.


**HHA6116 MINOR THESIS (PART TIME)**

**Campus** St Albans  
**Prerequisites** Nil  
**Co-requisites** Nil

**Learning Outcomes**  
At the completion of the subject, student should be able to:
- Independently conduct research that demonstrates the ability to define a problem to undertake a detailed literature search and review the relevant theoretical and practical implications on the topic area;
- Develop a research design and methodology to apply it to an appropriate pure or applied problem;
- Develop a set of research questions, and perform scholarly research tasks;
- Develop data collection tools including collection strategies and analysis skills;
- Develop a scholarly written thesis that demonstrates high levels of analytical and written communication skills.

**Content**  
The minor thesis is intended to provide students with an opportunity to undertake independent inquiry into an area of personal interest and applicable to their professional development. The thesis will be a research paper of not less than 15,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates the student’s ability to clearly define a research question, and to undertake a critical review of the relevant literature. Data selection, collection and analysis skills should also be demonstrated. The thesis should allow the candidate to utilise a methodology applicable to a research question. It is expected that the student will attend sessions on quantitative or qualitative research methods depending on the approach they intend to use in their approach to the topic chosen. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduct of the research.


**HHA1124 ISSUES AND TRENDS IN HEALTH**  
Not available in 2006

**Campus** St Albans  
**Prerequisite(s)** Nil

**Content**  
Origin and development of the Australian health care system. The development of 19th century tradition of charity in the present 'mixed economy' health care system, the concept of policy, the stage involved in policy development, stakeholders in policy development and implementation, the structure of Australia health care services, political parties and their health care policies.


HNF1125 KNOWLEDGE AND NURSING KNOWLEDGE
Not available in 2006

Campus St Albans
Prerequisite(s) Nil

Content This subject encourages students to examine critically some of the theories and ideologies that influence the development of the various kinds of knowledge, including nursing knowledge. This will include an examination of a number of significant theories about human nature – Christianity, Existentialism, Freud, Lorenz, Plato, Skinner and some oppositional theories and challenges from Feminist, non-Western and other ‘marginalised’ areas. Further, a number of concepts found in the history and philosophy of science will be considered – Newtonian thought, Kuhn and paradigms, and the bio-medical model as the conceptual foundation of modern medicine. Feminist ways of knowing and analysis of the relationship between knowledge and social and cultural factors, including theories of discourse and power will be offered. The subject encourages students to generate and apply nursing knowledge through a process of theory analysis and development. In particular, a number of theories and models, for example, those of King, Orem, Levine, Leininger, and Rogers will be analysed and the potential for nursing innovation explored.


Subject Hours 39 hours, comprising lectures, tutorials, and informal discussion/study workshops.

Assessment Tutorial presentation 50%; essay 50%. Students must pass all components of the assessment in order to gain a pass in this subject.

HNB1133 FOUNDATIONS IN PROFESSIONAL PRACTICE
Campus St Albans
Prerequisite(s) Nil

Learning Outcomes: Demonstrate beginning physical and mental health assessment skills. Document physical and mental health and assessment data accurately and accurately.

Content Module 1: Functional Health Patterns; emphasis on health perception and management; clinical reasoning process; occupational health and safety; procedural hand washing and asepsis; the complete nursing health history and general survey; assessment of family health; assessment of mental health status; cultural assessment including indigenous cultures; and physical examination of body systems.

Module 2: Topic content in this module includes: an introduction to the Australian Nursing and Midwives Council (ANMC) and their role in

nursing regulation including both the historical and contemporary influences on the development of nursing as a profession in Australia; and the structures both within and outside of nursing that influence scope of practice and professional boundaries. Credit Transfer Arrangements (including Articulation Pathways) if applicable.


Subject Hours Equivalent of 60 hours.

Assessment Evaluation of physical and mental health assessment skills and clinical reasoning 40%.

HNB1114 HEALTHCARE INFORMATICS
Campus St Albans
Prerequisites Nil

Co-requisites Nil

Learning Outcomes It is expected that by the end of the subject the student will be able to:

• Search for and find articles using appropriate databases;
• Demonstrate search strategies using Boolean operators and MESH terms;
• Evaluate the information found for its accuracy and quality;
• Develop the skills to produce writing appropriate to both the tertiary and clinical field they will be working in;
• Understand how technology may be used to inform clients/patients on various issues;
• Understand how electronic health records and other clinical systems can enhance the care and outcomes of patient encounters;
• Describe the use of technology systems for risk assessment;
• Understand modern patient dependency systems and how they may be used;
• Demonstrate skills in electronic communication and information retrieval;
• Discuss developments in technology assessment and the implications for nursing care;
• Show a beginning understanding of the ethical and privacy issues these systems may produce.

Content There are four broad content areas in this subject:

• The gathering of information for evidenced based practice. In this theme students will learn about the sources of best practice information including the Cochrane library and the Joanna Briggs institute as well as journal data-bases and the World Wide Web. The student will also be taught the beginnings of how the information gathered from these sources may be evaluated and the skills needed to turn this information into appropriate written works for both the tertiary and clinical field students will be working in;
• The use of technology to record and evaluate health care. HealthConnect, the Government’s universal health record, will be used as an example of where the government sees electronic health records being used in the future. Students will be introduced to how technology is increasingly being used to mange risk assessment, nursing workloads through patient dependency systems and to give first line managers financial and turnover information so that they may manage their work areas through such systems as Trendcare and Excelcare.
• The use of technology in patient education. This can vary from the many Web sites that offer health information, such as the Better Health Channel to small ‘in-house’ technology based programs that are used to educate patients to the production of low cost information sheets produced by ‘desktop publishing’ programs put together by many wards and departments.
• The emerging use of 'telemetry' technology in the remote and rural areas through the use of ‘tele-health’ technology and the nurses’ participation and role in this area.


HNB1115 HEALTHCARE LAW AND ETHICS
Campus St Albans
Prerequisite(s) Nil

Learning Outcomes Discuss the Mental Health legislation in Australia, including the Mental Health Act (Victoria) 1986 (Amend 2003) Discuss the significance for nursing care of public and private sector funding mechanisms for the acutely ill, chronically ill and the mentally ill patient; Content This module introduces the student to core legal and ethical principles required for beginning professional practice within the Australian Health Care system and covers the following topics: Introduction to Australian Law, Working within the Law, Legal Concepts, Professional Regulation, The regulation of drugs, Life and Death Issues, Professional practice and the ethical perspective. Module 2 This module introduces the student to: The interrelations between Commonwealth, state and private sector roles in health care, Health insurance and the funding of health services including: Healthcare funding, DRGs and Casemix, Pressures on the Pharmaceutical Benefits Schemes, The organisation of Health care services, Reforms of the Health Service.


Subject Hours Equivalent of 40 hours organised according to teaching mode used.

Assessment Achievement of subject objectives will be determined through the use of more than one type of assessment methodology. A combination of the following will be used: written Assessment, reflective journal, learning folio, oral presentation. Seminar presentation – 40%, Essay – 2000 words, 60%.

HNB1230 NURSING THEORY 1 : ACUTE CARE
Campus St Albans
Prerequisite(s) HNB1113 Foundations in Professional Practice

Learning Outcomes On completion of this unit of study, students should be able to: • Provide fundamental physical and mental health nursing care for patients experiencing an episode of illness/hospitalisation; • Utilise interpersonal and professional communication skills including verbal, written, and electronic information management skills in the practice of nursing care; • Integrate the practice of occupational health and safety requirements of the health care industry and the nursing profession; • Apply the principles of safe administration of therapeutic substances; • Conduct a systematic and accurate nursing assessment of patients experiencing an episode of hospitalisation; • Use a clinical reasoning process when participating in planning individualized patient care; and • Understand care needs, including emotional, spiritual and religious needs, relating to death, dying, bereavement, and palliation in various patient/ groups and in different contexts including the needs of indigenous and other cultures.

Content The content of this unit of study will be organised around the Functional Health Patterns, in particular: Activity & Exercise, Nutrition & Metabolism, Elimination & Cognition & Perception. • Oxygenation and Oxygen administration; • Cardiopulmonary Resuscitation; • Drug calculations and the principles of administration of therapeutic substances; • Skin integrity and wound care; • Prevention of infection in acute care settings; • Peri-operative nursing care; • ‘No Lift’ policy; • The “Activities of Daily Living”; • Fluid and electrolyte balance; • Mental health skills (counselling and communication); • Use of technology in the clinical setting; and • Care needs, including emotional, spiritual and religious needs, in relation to loss: end of life care, including death, grief, and palliation and including the needs of indigenous and other cultures.


HN2132 NURSING THEORY 2: ACUTE CARE
Campus St Albans
Prerequisite(s) Nursing Practice 1; Human Bioscience 2: Body Structure and Function

Learning Outcomes Identify the relevant ethical and legal issues associated with nursing clients experiencing medical/surgical and psychiatric conditions.

Content The content of this subject will be organised around the Functional Health Patterns, in particular: Activity & Exercise, Nutrition & Metabolism, Cognition and perception (neurological dysfunction). Specific nursing skills to be taught will relate to parenteral medication administration; pain assessment and management; nutrition and metabolism maintenance including IV therapy; occupational health and safety protocols and knowledge of infection control principles in relation to the above; hospitalisation and acute episodic illness including the planning, implementing and evaluation of care with a variety of medical and surgical conditions, including respiratory, cardiac, vascular, and neurological; patient education processes and skills; and factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in clinical settings. Credit Transfer Arrangements (including Articulation Pathways) if applicable


HN2133 NURSING PRACTICE 2: ACUTE CARE
Campus St Albans
Prerequisites Nursing Practice 1; Human Bioscience 2: Body Structure and Function

Co-requisites Content The content of this subject will be organised around the Functional Health Patterns, in particular: Activity & Exercise, Nutrition & Metabolism, Cognition and perception (neurological dysfunction). Specific nursing skills to be taught will relate to parenteral medication administration; pain assessment and management; nutrition and metabolism maintenance including IV therapy; occupational health and safety protocols and knowledge of infection control principles in relation to the above; hospitalisation and acute episodic illness including the planning, implementing and evaluation of care with a variety of medical and surgical conditions, including respiratory, cardiac, vascular, and neurological; patient education processes and skills; and factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in clinical settings. Credit Transfer Arrangements (including Articulation Pathways) if applicable


Assessment Problem based learning (PBL) group exercise – 30%, 1½ hour Examination – 40%, case study related literature review – 30%, Drug Calculation: Satisfactory/Unsatisfactory.

HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE
Campus St Albans
Prerequisite(s) Nursing Practice 1: Acute Care, Clinical Practicum 1: Acute Care, Human Bioscience 2: Body Structure and Function
Content Students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in acute medical/surgical settings. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANC Competencies will be used as an assessment framework by preceptors and clinical instructors. The students will be expected to focus on the themes they have been exposed to in the accompanying theory subject taken prior to this clinical practicum as outlined in the subject guide. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. The completion of University-specific client care documentation at intervals throughout the clinical placement will enhance the students' clinical communication/documentation skills. Client-student ratios will be graduated throughout the placement and numbers will depend upon the level of acuity. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

Assessment Problem based learning (PBL) group exercise – 30%, 1½ hour Examination – 40%, case study related literature review – 30%, Drug Calculation: Satisfactory/Unsatisfactory.

HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE
Campus St Albans
Prerequisite(s) Nursing Practice 1: Acute Care, Clinical Practicum 1: Acute Care, Human Bioscience 2: Body Structure and Function
Content Students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in acute medical/surgical settings. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANC Competencies will be used as an assessment framework by preceptors and clinical instructors. The students will be expected to focus on the themes they have been exposed to in the accompanying theory subject taken prior to this clinical practicum as outlined in the subject guide. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. The completion of University-specific client care documentation at intervals throughout the clinical placement will enhance the students' clinical communication/documentation skills. Client-student ratios will be graduated throughout the placement and numbers will depend upon the level of acuity. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

Assessment Problem based learning (PBL) group exercise – 30%, 1½ hour Examination – 40%, case study related literature review – 30%, Drug Calculation: Satisfactory/Unsatisfactory.

HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE
Campus St Albans
Prerequisite(s) Nursing Practice 1: Acute Care, Clinical Practicum 1: Acute Care, Human Bioscience 2: Body Structure and Function
Content Students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in acute medical/surgical settings. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANC Competencies will be used as an assessment framework by preceptors and clinical instructors. The students will be expected to focus on the themes they have been exposed to in the accompanying theory subject taken prior to this clinical practicum as outlined in the subject guide. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. The completion of University-specific client care documentation at intervals throughout the clinical placement will enhance the students' clinical communication/documentation skills. Client-student ratios will be graduated throughout the placement and numbers will depend upon the level of acuity. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

Assessment Problem based learning (PBL) group exercise – 30%, 1½ hour Examination – 40%, case study related literature review – 30%, Drug Calculation: Satisfactory/Unsatisfactory.

Internet links

Class Contact

Lectures 24 hours (3 hours per week) Tutorials 16 hours (2 hours per week)

Assessment

One 3 hour exam worth 60% of the unit grade. Seminar presentation and 2000 word written assignment worth 40% of the unit grade. In order to pass the unit students must attend at least 6 out of the 8 tutorials.

HNB2234 NURSING PRACTICE 4: ACUTE CARE

Campus St Albans

Prerequisite(s) Nursing Practice 2: Acute Care, Nursing Practice 3: Health & Illness in Older Adults

Content The content of this subject will be organised around the Functional Health Patterns, in particular: Nutrition & Metabolism, Elimination (gastrointestinal & renal); Movement and co-ordination (musculoskeletal skeletal trauma); Sexuality and reproduction (reproductive cancers). Specific nursing skills to be taught will relate to parenteral medication administration; complex care needs for those patients who are unable to care for their own health needs; elimination pattern; sexuality and reproduction pattern; occupational health and safety protocols and knowledge of infection control principles in relation to the above; hospitalisation and acute episodic illnesses including the planning, implementation and evaluation of care used to treat clients with a variety of medical and surgical conditions, including gastrointestinal, renal, musculoskeletal trauma, reproductive cancers; patient education processes and skills; and factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in clinical settings. Credit Transfer Arrangements (including Articulation Pathways) if applicable.


complete of personal learning objectives and reflective journal entries
during each week of clinical placement; and demonstration of safe
and competent practice in line with the ANC Competencies as defined for a
student at this stage of the course.

HNB2235 NURSING PRACTICE MENTAL HEALTH & ILLNESS
Campus St Albans
Prerequisite(s) HNB1133 Foundations in Nursing 1, HNB1134
Foundations in Nursing 2, APT1311 Psychology Across the Lifespan
Content The aim of this subject is to develop students’ knowledge
skills and attitudes in the promotion of mental health. To meet the
needs of people with altered mental health status in institutional and
community settings.
and practice of psychiatric nursing (7th Ed) St Louis: Mosby.
Recommended Reading American Psychiatric Association (2000)
Diagnostic and statistical manual of mental disorders DSM-IV-TR.
Comprehensive psychiatric nursing. (5th ed ) St Louis: Mosby Year Book Newell, R., &
Psychiatric nursing (3rd Ed) St Louis: Mosby Year Book Newell, R., &
Concepts of care (3rd Ed) Philadelphia: F. A. Davis Company
Lippincott
and New Zealand College of Mental Health Nurses home page. The
College is the professional body for mental health nurses and the site
provides many useful links, including a newsgroup email subscription
ausein.tinders.edu.au AuSEinet – Australian Early Intervention
Network home.vicnet.net.au/~eppic/ Early Psychosis Prevention and
NSW Multicultural Health Communication Service
of Department of Health & Aged Care
Subject Hours Equivalent of 40 hours organised according to teaching
mode used.
Assessment Seminar presentation 35%; Clinical related assignment –
65%

HNB2236 CLINICAL PRACTICUM 5 MENTAL HEALTH AND ILLNESS
Campus St Albans
Prerequisite(s) HNB1133 Foundations in Nursing 1, HNB1134
Foundations in Nursing 2, APT1311 Psychology Across the Lifespan.
Content The aim of this subject is to develop students’ knowledge,
skills and attitudes in mental health and illness. To promote mental
health and to meet the needs of people with altered mental health
status in institutional and community settings. Clinical practice involves
the provision of, or assistance with, mental health nursing to selected
clients in mental health hospitals, mental health units, and community
settings, under the guidance of either a clinical teacher or preceptor.
and practice of psychiatric nursing (7th Ed) St Louis: Mosby.
Recommended Reading American Psychiatric Association (2000)
Diagnostic and statistical manual of mental disorders DSM-IV-TR.
Washington DC: American Psychiatric Association Frisch, N.C. &
Sydney: Prentice Hall, Gournay, K., Laraia, M.T., Raines, M.L. &
Davis Company Haber, J., Krainovich-Miller, B., McMahon, A. L. &
Psychiatric nursing (3rd Ed) St Louis: Mosby Year Book Newell, R., &
Concepts of care (3rd Ed) Philadelphia: F. A. Davis Company
Lippincott
and New Zealand College of Mental Health Nurses home page. The
College is the professional body for mental health nurses and the site
provides many useful links, including a newsgroup email subscription
ausein.tinders.edu.au AuSEinet – Australian Early Intervention
Network home.vicnet.net.au/~eppic/ Early Psychosis Prevention and
NSW Multicultural Health Communication Service
of Department of Health & Aged Care
Subject Hours Equivalent of 70 hours organised according to teaching
mode used.
Assessment Achievement of clinical competencies (Ungraded
Pass/Fail)

HNB2236 CLINICAL PRACTICUM 5 MENTAL HEALTH AND ILLNESS
Campus St Albans
Prerequisite(s) HNB1133 Foundations in Nursing 1, HNB1134
Foundations in Nursing 2, APT1311 Psychology Across the Lifespan.
Content The aim of this subject is to develop students’ knowledge,
skills and attitudes in mental health and illness. To promote mental
health and to meet the needs of people with altered mental health
status in institutional and community settings. Clinical practice involves
the provision of, or assistance with, mental health nursing to selected
clients in mental health hospitals, mental health units, and community
settings, under the guidance of either a clinical teacher or preceptor.
and practice of psychiatric nursing (7th Ed) St Louis: Mosby.
Recommended Reading American Psychiatric Association (2000)
Diagnostic and statistical manual of mental disorders DSM-IV-TR.
Washington DC: American Psychiatric Association Frisch, N.C. &
Sydney: Prentice Hall, Gournay, K., Laraia, M.T., Raines, M.L. &
Davis Company Haber, J., Krainovich-Miller, B., McMahon, A. L. &
Psychiatric nursing (3rd Ed) St Louis: Mosby Year Book Newell, R., &
Concepts of care (3rd Ed) Philadelphia: F. A. Davis Company
Lippincott
and New Zealand College of Mental Health Nurses home page. The
College is the professional body for mental health nurses and the site
provides many useful links, including a newsgroup email subscription
ausein.tinders.edu.au AuSEinet – Australian Early Intervention
Network home.vicnet.net.au/~eppic/ Early Psychosis Prevention and
NSW Multicultural Health Communication Service
of Department of Health & Aged Care
Subject Hours Equivalent of 70 hours organised according to teaching
mode used.
Assessment Achievement of clinical competencies (Ungraded
Pass/Fail)

Class Contact: Equivalent of 70 hours organised according to teaching mode used.

Assessment: Achievement of clinical competencies (Ungraded: Pass/Fail)

HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH & ILLNESS

Campus: St Albans

Prerequisites: APT 1311 Psychology Across the Lifespan

Co-requisites: Nil

Learning Outcomes: On completion of this subject, students should be able to:

- Demonstrate the application of knowledge acquired through related theoretical and skills based subjects;
- Adapt knowledge of health assessment procedures to the individualised care requirements of clients in appropriate care settings;
- Perform safe and competent nursing care in accordance with the ANC competencies (2000) and Australian and New Zealand College of Mental Health Nurses Inc. Standards of Practice for Mental Health Nursing, and consistent with level of knowledge expected at this stage of the bachelor of nursing;
- Develop individualised nursing care plans for clients acknowledging physical/mental condition, communication skills, socio-cultural or indigenous background and developmental stage;
- Apply the principles of occupational health and safety and infection control to all aspects of health care delivery;
- Apply knowledge of communication skills to all aspects of the clinical experience, and demonstrate appropriate interpersonal skills with clients, families, and healthcare personnel;
- Demonstrate knowledge of pharmacological agents such as route of administration, distribution, metabolism, common side effects and excretion;
- Apply legal and ethical principles to the holistic health care requirements of clients;
- Participate in reflective practice process through documentation, discussion and self-evaluation of learning experiences both on campus and in the clinical setting and the relationship between these experiences;
- Critically apply relevant theoretical concepts from related areas of study in the analysis of nursing situations; and
- Participate in client education and provide information regarding the availability of community resources for persons requiring assistance on discharge or transfer.

Content: Students will be provided with opportunities to practice a range of mental health nursing skills, including:

- Conduct psychosocial health assessment and mental status assessment and interviewing;
- Utilise a range of therapeutic communication techniques;
- Observe therapeutic modalities;
- Develop nursing care plans for persons with mental health disorders, including anxiety disorders, depression, schizophrenia, bi-polar, eating, substance use, personality disorders;
- Utilise reflective skills to evaluate nursing practice;
- Provide care to clients with psychiatric disorders, including bi-polar, eating, substance use, and personality;
- Provide care to clients with psychiatric disorders of older age, including dementia and confusion;
- Provide care to clients who are suicidal and engage in self-harm;
- Develop beginning skills in risk assessment and crisis intervention;
- Assist in pharmacological interventions, including anti manic and antidepressants;
- Engage clients in medication education; and
- Culturally appropriate assessment and interventions including Indigenous Australians.


Class Contact: Equivalent of 140 hours

Assessment: In order to be awarded a satisfactory grade for this subject, the student must successfully complete each of the following:

- Demonstrate safe and competent practice in line with the ANCI Competencies and Australian and New Zealand College of Mental Health Nurses Inc. Standards of Practice for Mental Health Nursing, as defined for a student at this stage of the course; and
- Demonstrate competency in conducting a Mental Health Status Examination.

Final assessment: Satisfactory / Unsatisfactory

HNB2241 NURSING THEORY 4 ACUTE CARE

Campus: St Albans

Prerequisites: HNB 1232 Nursing Theory 2: Acute Care, HNB 2135 Nursing Theory 3: Health & Illness in Older Adults

Co-requisites: Nil

Learning Outcomes: On completion of this subject, students should be able to:

- Apply clinical reasoning skills to the identification of nursing problems, appropriate interventions and prioritisation of care for clients in clinical settings;
- Demonstrate knowledge of the relevant pharmacological agents used to treat clients with a variety of conditions related to the themes of the subject;
- Develop selected nursing skills related to clients experiencing episodes of illness related to the themes of the subject;
- Understand appropriate occupational health and safety protocols including knowledge of infection control in clinical settings;
- State comprehensive client assessment criteria using the functional health patterns in clinical settings related to the themes of the subject;
- Develop appropriate theoretical knowledge in the delivery of health care to clients in clinical settings;
- Identify the relevant ethical and legal issues associated with nursing clients experiencing conditions related to the themes of the subject;
- Discuss the role of the nurse in patient education related to clients experiencing illnesses related to the themes of the subject; and
- Utilise a self-directed approach to learning and professional development.

Content: The content of this subject will be organised around the Functional Health Patterns, in particular: Nutrition & Metabolism, Elimination (gastrointestinal & renal); Movement and coordination (poplar, eating, substance use, and personality); Parenteral medication administration; Complex care needs for those patients who are unable to care for their own health needs; Elimination pattern; Sexuality and reproduction pattern; Occupational health and safety protocols and knowledge of infection control principles in relation to the above;
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Hospitalisation and acute episodic illnesses including the planning, implementing and evaluation of care used to treat clients with a variety of medical and surgical conditions, including gastrointestinal, renal, musculoskeletal trauma, reproductive cancers;
- Patient education processes and skills; and
- Factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered, informed by the analysis of client care in clinical settings.

Required Reading

Recommended Reading

HNB3100 PHARMACOLOGY IN NURSING PRACTICE
Campus St Albans
Pre-requisite(s) RBM2541 Human Bioscience 3: Pathophysiology, HNB2241 Nursing Theory 4: Acute Care, HNB2238 Nursing Theory 5: Mental Health & Illness
Learning Outcomes Students will be expected to: Apply the general principles of pharmacology to the professional context of nursing practice Apply the general principles of pharmacology to the responsibilities of nursing practice Explain the pharmacokinetics factors involved in the modification of drug action Predict the changes in response to medications across the lifespan Identify significant relationships of polypharmacy and clinical overdose Discuss the relationship between individuals presenting with peripheral nervous system, central nervous system, heart and vascular system, kidney and urinary system, respiratory system, gastrointestinal system, special senses, endocrine system, reproductive system, microorganisms or body defences conditions and the drugs which modify or reverse these the pathophysiological responses of these conditions Discuss the relationship of conventional drug therapy to nutritional and complementary therapies in the care of individuals.

Content The aim of the unit of study is to build upon the previously introduced general principles of pharmacology as they relate to nursing. The unit of study aims to assist students to attain an advanced level of knowledge of the pharmacological management of complex health problems that an individual may experience, and as such addresses: Pharmacology in the professional context sociocultural aspects, legal and ethical issues Professional responsibilities – clinical decision making in drug therapy, medication errors and management of adverse drug reactions Pharmacokinetic factors that modify drug action Changes in response to medications across the lifespan Polypharmacy and clinical overdose Drugs affecting the: peripheral nervous system, central nervous system, heart and vascular system, kidney and urinary system, respiratory system, gastrointestinal system, special senses, endocrine system, reproductive system, proliferation of microorganisms and body defences Nutritional and natural therapies

Required Reading

HNB3101 RESEARCH FOR PRACTICE
Campus St Albans
Pre-requisite(s) Nil
Learning Outcomes Understand the research process in relation to general and psychiatric nursing practice;
Content Links between general and psychiatric nursing education, theory and practice;
Required Reading
HNB3103 NURSING PRACTICE 6: CHILD, ADOLESCENT & FAMILY

Campus St Albans.

Prerequisite(s) Human Bioscience 4, Nursing Practice 4: Acute Care, Nursing Practice 5: Mental Health & Illness.

Content The content of this subject will reflect the following: family centred care and the effects of hospitalisation on the child; the effect of different cultural, indigenous and ethnic backgrounds on the care and role of children and adolescents within the family and health care setting; growth and developmental stages of the child from infancy to adolescence; prevention and early intervention of sexually transmitted diseases (excluding HIV/AIDS); episodic illnesses and life events including the planning, implementing and evaluation of care used to treat clients with a variety of medical and surgical conditions, including diabetes and planned and unplanned pregnancy; medication issues in relation to child and adolescent nursing; infectious childhood diseases and their impact on the child's health, including immunization programs available to various cultural and indigenous groups; basic life support for children; services available to assist adolescents work through individual health issues; the role of the nurse in child and adolescent nursing in relation to mandatory reporting requirements; Mental health issues of the older child and adolescent, including homelessness, abuse (physical, psychological, sexual), eating disorders, and the early onset of other mental health disorders; suicide, self-harm, substance abuse prevention and intervention in cultural groups including indigenous Australians; and family assessment. Credit Transfer Arrangements (including Articulation Pathways) if applicable.


Subject Hours Equivalent of 40 hours.

Assessment Two hour examination – 50%, tutorial examination – 50%.

HNB3107 HEALTH & ILLNESS IN THE COMMUNITY

Campus St Albans

Prerequisite(s) Nil

Learning Outcomes Describe the scope of ‘community’ nursing in Australia in relation to general and psychiatric nursing:

• Describe the changes in, and causes of, the major physical and mental health problems in cosmopolitan and non-cosmopolitan populations over the past 200 years, including Australia’s Aboriginal populations;

• Discuss the significance of social, cultural, structural and environmental factors in determining physical and mental health outcomes in the early 21st Century;

Content Frameworks, for understanding general and psychiatric community nursing in the 21st century; The psycho-social determinants of health – understanding the mechanisms: Epidemiological data – revisiting the psycho-social determinants of health;


Subject Hours Equivalent of 40 hours.

Assessment Written critique paper (2000 words) – 50%, scenario based clinical decision-making exercise – 50%.

HNB3108 NURSING THEORY 6 CHILD ADOLESCENT & FAMILY

Campus St Albans

Pre-requisite(s) RBM217 Human Bioscience 3: Pathophysiology, HNB 2233 Nursing Theory 4: Acute Care, HNB 2238 Nursing Theory 5: Mental Health & Illness.

Co-requisites Nil

Aims The aim of this unit is to develop a foundational understanding of the knowledge and theories related to the specialised field in nursing child, adolescent and family in the community. This unit will use an integrated approach to focus on the health and illness of the child and adolescent within a family unit. Furthermore, this unit will provide an overview of the developmental perspective of pregnancy and its impact on the family. Subsequently, the unit will explore the following concepts: formation of the family unit; growth and development of the child into an adolescent; family assessment models; major theories of child development and their application to nursing interventions; current issues of health and illness experienced by the child and adolescent in the community and other health institutions.

Learning Outcomes On completion of this subject, students should be able to:

• Apply relevant knowledge of bioscience and developmental psychology to the growth and development of the child and adolescent;

• Apply relevant knowledge of bioscience and developmental psychology to common paediatric disorders;

• Demonstrate communication skills required in providing care and support for children/adolescents and their families;
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Select appropriate strategies and interventions which assist in the reduction of stress and anxiety for the child/adolescent;
- Examine how the family's structure and pattern of functioning affects the child's development and family interactions;
- Explore the cultural and socio-political rights of children and adolescents and their implications for nursing practice;
- State the data specifically pertinent to assessment of infants, children and adolescents;
- Apply a problem-solving approach to meet the needs of children/adolescents and their families during hospitalisation;
- Identify the adaptations that may need to be made to the care of children/adolescents who are from diverse cultural, indigenous and ethnic backgrounds; and
- Understand the mental health issues of the older child and adolescent.

Content The content of this subject will reflect the following:

- Family centred care and the effects of hospitalisation on the child;
- The effect of different cultural, indigenous and ethnic backgrounds on the care and role of children and adolescents within the family and health care setting;
- Growth and developmental stages of the child from infancy to adolescence;
- Prevention and early intervention of sexually transmitted diseases (excluding HIV/AIDS);
- Epidemic illnesses and life events including the planning, implementing and evaluation of care used to treat clients with a variety of medical and surgical conditions, including diabetes and unplanned pregnancy;
- Medication issues in relation to child and adolescent nursing;
- Infectious childhood diseases and their impact on the child's health, including immunization programs available to various cultural and indigenous groups;
- Basic life support for children;
- Services available to assist adolescents work through individual health issues;
- The role of the nurse in child and adolescent nursing in relation to mandatory reporting requirements;
- Mental health issues of the older child and adolescent, including homelessness, abuse (physical, psychological, sexual), eating disorders, and the early onset of other mental health disorders;
- Suicide, self-harm, substance abuse prevention and intervention in cultural groups including indigenous Australians; and
- Family assessment.


Class Contact 140 hours over 4 weeks of placement (Clinical Placement)

Assessment In order to be awarded a satisfactory grade for this subject, the student must successfully complete each of the following: Demonstration of competence in selected skills, according to specified criteria, and in line with the ANMC Competencies as defined for a student at this stage of the course; Satisfactory participation in reflective practice, as defined by completion of personal learning objectives and reflective journal entries during each week of clinical placement; and Demonstration of safe and competent practice in line with the ANMC Competencies as defined for a student at this stage of the course. Final assessment: Satisfactory / Unsatisfactory

HNB3115 CLINICAL PRACTICUM 6: CHILD ADOLESCENT AND FAMILY MENTAL HEALTH NURSING

Campus St Albans

Prerequisites RBM2541 Human Bioscience 3: Pathophysiology. HNB2241 Nursing Theory 4: Acute Care, HNB2234 Clinical Practicum 4: Acute Care, HNB2238 Nursing Theory 5: Mental Health & Illness, HNB2239 Clinical Practicum 5: Mental Health & Illness

Co-requisites Nil

Learning Outcomes On completion of this subject, students should be able to:
- Provide safe administration of medications to children and adolescents in mental health settings;
- Implement beginning counselling skills when working with children and adolescents in mental health settings;
- Utilise nursing care skills relevant to child and adolescent with mental health problems:
- Practice mental health promotion, prevention and early intervention;
- Practice mental health assessment of the child, adolescent and family;
- Demonstrate inclusion of the family in providing individualized care to children and adolescents with mental health problems; and
• Demonstrate an awareness of the ethical and legal issues, which impact on the care of the child, adolescent and family in mental health contexts.

Content The content of this subject will reflect the following: Students will undertake 70 hours of clinical practice with a major focus on child and adolescent mental health and engage in reflective practice with a mentor/clinical educator.

Required Reading

Recommended Reading


Class Contact
70 hours of clinical experience.

Assessment
In order to be awarded a satisfactory grade for this unit of study, the student must successfully complete each of the following: • Demonstration of competence in selected skills, according to specified criteria, and in line with the ANCI Competencies as defined for a student at this stage of the course; • Satisfactory participation in reflective practice, as defined by completion of personal learning objectives and reflective journal entries during each week of clinical placement; and • Demonstration of safe and competent practice in line with the ANC Competencies as defined for a student at this stage of the course. Final assessment: Satisfactory / Unsatisfactory

HNB3134 NURSING PRACTICE 6: HEALTH OF THE COMMUNITY

Campus St Albans

Prerequisite(s) HNB 1133 foundation of Nursing 1, HNB1134 Foundation of Nursing 2, HNB 1135 Professional Nursing 1, HNB1234 Professional Nursing 2

Content
The aim of this subject is to provide an important basis for professional nursing in all practice settings as it should enhance students understanding about health outcomes in the Australian population as a whole as well as subsections of that population, including Aboriginal Australians. Strategies aimed at improving the health of aggregates of people will also be examined for their effectiveness. In addition, students will gain an understanding of the approaches commonly used to assess the needs of a geopolitical area.

Required Reading


Recommended Reading

HNB3136 NURSING PRACTICE 7: MENTAL HEALTH & ILLNESS

Campus St Albans

Prerequisite(s) HNB2235 Nursing Practice 5: Mental health & Illness, HNB2236 Clinical Practicum 5: Mental Health & Illness

Content
The aim of this subject is to further develop students’ knowledge, skills and attitudes in the promotion of mental health. To meet the needs of people with altered mental health status in institutional and community settings. To provide culturally appropriate care to individuals from various cultural groups, including Aboriginal and Torres Strait Islanders.

Required Reading

Recommended Reading


Recommended Reading


HNB3135 CLINICAL PRACTICUM 6: HEALTH OF THE COMMUNITY

Campus St Albans

Prerequisite(s) HNB3134 Nursing Practice 6: The Health of the Community

Content
The aim of this subject is to further develop a number of process skills important in nursing as well as life-long learning and consolidate theory from the pre-requisite subject, The Health of Communities. In particular, students should gain a deeper appreciation of the factors that lead to variation in health outcomes by undertaking a community needs analysis.

Required Reading


Recommended Reading


Subject Hours Equivalent of 40 hours organised according to teaching mode used.

Assessment
The students will be required to undertake a group assignment that involves a population/community health concern. A total of 2000 words per student – 100%
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Subject Hours Equivalent of 40 hours organised according to teaching mode used.

Assessment Seminar presentation 35%; Examination 65%

HNB3136 NURS PRACTICE 7 MENTAL HLTH AND ILLNESS

Campus St Albans
Prerequisites Nursing Practice 5: Mental Health & Illness, Clinical Practicum 5: Mental Health & Illness
Co-requisites Learning Outcomes This subject is designed to provide students with an opportunity to:

• explore contemporary research relevant to mental health and illness nursing utilise a problem solving approach as a framework to guide clinical practice
• explore the clinical manifestations of common psychiatric disorders develop beginning health assessment skills in risk assessment and crisis intervention develop the requisite knowledge to plan, implement and evaluate mental health care for individuals and families
• discuss common therapeutic modalities, including psychopharmacology and electroconvulsive therapy (ECT)

Content Mental Health and Illness
Psychiatric disorders, including bi-polar, eating, substance use, personality
Psychiatry of older age, including dementia and confusion Suicide and self-harm prevention and intervention <BR> Consumer participation
Develop the requisite knowledge to plan, implement and evaluate psychiatric nursing care for individuals and families. Psychopharmacology, including anti manic and antidepressants Concordance with medication taking Electro convulsive therapy
Motivational interviewing
Culturally appropriate assessment and interventions


Class Contact Equivalent of 40 hours organised according to teaching mode used.

Assessment Seminar presentation 35%; Examination 65%

HNB3137 CLINICAL PRACTICUM 7: MENTAL HEALTH & ILLNESS

Campus St Albans
Prerequisites(s) HNB22435 Nursing Practice 5: Mental Health & Illness, HNB22356 Clinical Practicum 5: Mental Health & Illness.

Content The aim of this subject is to further enhance students' knowledge, skills and abilities in mental health and illness. To promote mental health, and to meet the needs of people with altered mental health status in institutional and community settings. To provide culturally appropriate care to individuals from various cultural groups, including Aboriginal and Torres Strait Islanders. Clinical practice involves the provision, or assistance with the provision of mental health nursing care to selected clients/patients in mental health hospitals or units, and community settings, under the guidance of either a clinical teacher or preceptor.


Class Contact Equivalent of 40 hours organised according to teaching mode used.

Assessment Seminar presentation 35%; Examination 65%

HNB3137 CLINICAL PRACTICUM 7: MENTAL HEALTH & ILLNESS

Campus St Albans
Prerequisites(s) HNB22435 Nursing Practice 5: Mental Health & Illness, HNB22356 Clinical Practicum 5: Mental Health & Illness.

Content The aim of this subject is to further enhance students' knowledge, skills and abilities in mental health and illness. To promote mental health, and to meet the needs of people with altered mental health status in institutional and community settings. To provide culturally appropriate care to individuals from various cultural groups, including Aboriginal and Torres Strait Islanders. Clinical practice involves the provision, or assistance with the provision of mental health nursing care to selected clients/patients in mental health hospitals or units, and community settings, under the guidance of either a clinical teacher or preceptor.


Subject Hours Equivalent of 70 hours organised according to teaching mode used.

Assessment Achievement of clinical competencies (Ungraded: pass/fail)
HNB3201 NURSING THEORY 8 (ELECTIVE): HEALTH & ILLNESS IN OLDER ADULTS

Campus St Albans

Prerequisites

Nursing Practice 3: Health & Illness in Older Adults

Content

Current gerontological research; review of the physiological and psychosocial consequences of normal ageing; focus on health promotion/illness prevention; overview of major theories of ageing; complex clients: refinement of assessment skills including use of specific assessment tools; assessment and clinical decision making; includes assessment and management of pain and bowel function, assessment and promotion of urinary continence and the assessment and management of challenging behaviours in confused clients; and Review care frameworks; includes intra-agency transfers and discharge planning.

Required Reading


Recommended Reading


Subject Hours Equivalent of 40 hours

Assessment

Written assignment (2500 words) – 60%, Individual portfolio (1500 words) – 40%.

HNB3202 NURSING THEORY 8: (ELECTIVE) MENTAL HEALTH & ILLNESS

Campus St Albans

Prerequisites

HNB 2238 Nursing Theory 5: Mental Health & Illness

Co-requisites

Nil

Learning Outcomes

On completion of this subject, students should be able to:

• Understand the theoretical background and principles of cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management;

• Discuss cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management;

• Explore contemporary relevant research in cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management;

• Discuss health policy and issues related to mental health service provision;

• Discuss family sensitive practice; and

• Understand the concept of social inclusion.

Content

Related mental health and illness research;

• Cognitive behavioural therapy;

• Group therapy;

• Prevention and management of aggression;

• Case management;

• Mental health policy;

• Family sensitive practice; and

• Social inclusion.

Required Reading


Recommended Reading


Class Contact

Equivalent of 40 hours

Assessment

Case management study, comprising:

• Interview and assessment (1500 words.) 40%

• Case management report (2500 words.) 60%

HNB3204 NURSING THEORY 8: (ELECTIVE) CHILD ADOLESCENT & FAMILY

Campus St Albans

Prerequisites

HNB 3103 Nursing Theory 6: Child, Adolescent & Family

Co-requisites

Nil

Learning Outcomes

On completion of this subject, students will be able to:

• Utilise the principles of growth and development when assessing the health or illnesses of sick children and adolescent;

• Apply selected interventions to promote health of the child and adolescent in a variety of settings;

• Select age and culturally appropriate interventions to promote healthy personal and social development of the child and adolescent including indigenous clients; and

• Develop an understanding of psychosocial alterations in the child and adolescent including behaviour problems.

Content

• Review of principles of growth and development in relation to acute paediatric nursing, such as the sick child and adolescent in a variety of settings;

• Health promotion and societal concerns of childhood and adolescence such as AIDS, behaviour problems, sexual assault;

• The more common child and adolescent genetic and development disorders requiring short/long term nursing interventions/management;

• A variety of conditions including prevention strategies encountered in children and adolescents including childhood accidents and trauma, and sexually transmitted disease prevention; and

• Adapt aspects of the above to various cultural and indigenous groups.

Required Reading


Recommended Reading


Class Contact

Equivalent of 40 hours

Assessment

Case study (2000 words.) 50%

Project (2000 words.) 50%
HNB3215 NURSING THEORY 8: MENTAL HEALTH NURSING
Campus St Albans
Prerequisites HNB2238 Nursing Theory 5: Mental Health & Illness
Co-requisites Nil
Learning Outcomes On completion of this subject, students will be able to:
• Understand mental health across the lifespan; • Discuss cognitive behaviour therapy, group and family therapy, preventative health and care management; • Discuss research in the application and practice of case management within Australia; • Discuss health policy and issues related to mental health service provision in Australia, in particular the Mental Health Act of Victoria 1986; • Discuss the role of self-help groups and Non-Government Organisations (NGO’s) in the provision of care; • Discuss the importance of cultural sensitivity when planning and implementing care; • Discuss family sensitive practice; • Understand the concept of social inclusion and stigma; • Understand the role of the consumer and consumer representative in mental health care; • Discuss psychotropic medication in relation to the knowledge and skills in administration, including the related roles of nurses, consumers and carers; • Understand the skills required to effectively document consumer care; • Further develop communication and assessment skills; • Understand the diagnostic systems including DSM-IV-TR and ICD 10; • Discuss special populations such as the person with mental illness and co-existing physical illness, the homeless, prisoners, refugees and survivors of violence and abuse.

Content • Mental health across the lifespan; • Related mental health and illness research; • Cognitive behavioural therapy; • Group therapy; • Prevention and management of aggression; • Case management; • Mental health policy and Mental Health Act of Victoria 1986; • Family sensitive practice; • Social inclusion; • Person with mental illness and co-existing physical illness, the homeless, prisoners, refugees and survivors of violence and abuse; • Diagnostic systems including DSM-IV-TR and ICD 10; • Communication and assessment skills; • Skills required to effectively document consumer care; • Psychotropic medication and the related roles of nurses, consumers and carers; • Social inclusion and stigma; • Cultural sensitivity; • Self-help groups and Non-Government Organisations (NGO’s).


mental health care; • Administering psychotropic medication, as appropriate; • Participating in discussion about the roles of nurses, consumers and carers regarding psychotropic medication; • Reinforcing the skills required to effectively document consumer care; • Further developing communication and assessment skills;

Required Reading

Recommended Reading

Class Contact
280 hours of clinical experience.

Assessment
In order to be awarded a satisfactory grade for this Unit of study, the student must successfully complete each of the following: • Demonstration of competence in skills in line with those required for a graduate nurse at beginning level, in line with the ANMC competencies (2005); • Demonstrate safe and competent practice in line with the ANMC Competencies and Australian and New Zealand College of Mental Health Nurses Inc. Standards of Practice for Mental Health Nursing, as defined for a student at this stage of the course; and • Demonstrate competency in conducting a Mental Health Status Examination. Final assessment: Satisfactory / Unsatisfactory

HNB3230 CLINICAL PRACTICUM 8 (ELECTIVE): MENTAL HEALTH & ILLNESS

Campus St Albans
Prerequisite(s) Nil

Required Reading Chang, E. and Daly, J. (2001). Transitions in nursing. Sydney: MacLennan & Petty


Subject Hours Equivalent of 40 hours.

Assessment Presentation 30%, management case study assignment (2000 words) – 50%, development of a CV and interview techniques. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

HNB3237 RESEARCH FOR PRACTICE

Campus St Albans
Prerequisites Nil

Co-requisites Nil

Learning Outcomes At the completion of this subject, the students should be able to:
• Understand the research process in relation to midwifery practice;
• Critically examine the relationship between midwifery research and improvement in health care outcomes;
• Develop an understanding of research designs and methodologies;
• Critically evaluate a piece of midwifery research;
• Understand the ethical implications of research;
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

• Develop a beginning knowledge in research proposal relevant to clinical practice;
• Be able to access and appraise research papers and systematic reviews;
• Develop the ability to appraise a systematic review of the literature on an aspect of clinical practice;
• Understand how to utilise research to inform clinical practice.

Content
Significance of research in midwifery:
• Links between midwifery education, theory and practice;
• Approaches to research process: qualitative and quantitative designs including mixed and triangulation methods;
• Classification and characteristics of exploratory, descriptive and explanatory studies;
• Steps in research process: identification of problem statement, literature review, theoretical framework, sampling, data collection and analysis using descriptive and inferential statistics;
• Ethics and research;
• Disseminating and applying midwifery research;
• Evaluating research reports;
• Appraising a systematic review of the literature;
• Utilise basic statistics for appraisal of systematic reviews, including statistical significance, chance, probability, confidence intervals, odds ratios, numbers needed to treat and pitfalls in analysis; and
• Appraising the professional application of a systematic review and meta analysis to an aspect of professional practice.

Required Reading
Recommended Reading

Class Contact
Equivalent of 56 hours

Assessment
Assignment [2000 words]: 50%
Examination: 50%

HNB3241 NURSING PRACTICE 9: (ELECTIVE) CHILD AND FAMILY HEALTH
Campus St Albans
Prerequisite(s) Nursing Practice 6: Health of the Community, Clinical Practicum 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practicum 7: Mental Health and Illness

Subject Aims
The aim of this subject is to give students the opportunity to practice clinical skills in caring for the child and family in a paediatric clinical environment. It is designed to help students make the often difficult transition from study to work practice. Students are therefore given the opportunity to consolidate their knowledge of the principles of paediatric nursing and skills acquired throughout the course. It also aims to provide students with the opportunity to develop and appraise management skills in the delivery of paediatric nursing care.

Content
Students will undertake 210 hours of clinical practice in an acute paediatric setting.

Methods of Teaching
A clinical nurse will be appointed by the School of Nursing to a ratio of 1:8 to supervise students during their clinical practicum experience. Alternatively, a preceptorship approach may be used, depending on the requirement of the agency at which the student is placed.

Required Reading

Subject Hours
210 hours of clinical experience, comprising of five days per week, seven hours per day for six weeks.

Assessment
Achievement of the specified ANCI Competencies (Ungraded: Pass/Fail).

HNB3247 NURSING PRACTICE 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY
Campus St Albans
Prerequisite(s) Nursing Practice 6: Child, Adolescent & Family

Content
Review of principles of growth and development in relation to acute paediatric nursing, such as the sick child and adolescent in a variety of settings; health promotion and societal concerns of childhood and adolescence such as AIDS, behaviour problems, sexual assault; the care of common child and adolescent genetic and development disorders requiring short/long term nursing interventions/management; a variety of conditions including prevention strategies encountered in children and adolescents including childhood accidents and trauma, and sexually transmitted disease prevention; and adapt aspects of the above to various cultural and indigenous groups.

Required Reading

Subject Hours Equivalent to 40 hours.

Assessment Case study (2000 words) – 50%, Project (2000 words) – 50%.

HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY

Campus St Albans

Prerequisite(s) Nursing Practice 6: Child, Adolescent & Family, Clinical Practicum 6: Child, Adolescent & Family


Subject Hours Equivalent to 40 hours of clinical experience.

Assessment In order to be awarded a satisfactory grade for this subject, the student must successfully complete each of the following: demonstration of competence in skills in line with those required for a graduate nurse at beginning level; Critique of evidenced based nursing; A functional health patterns approach will be used as organising framework for assessment, planning, implementation and evaluation of nursing interventions of patients with complex care needs and their significant others; Complex wound assessment and interventions; Chronic or complex pain assessment and management; The helping role of the nurse; A problem based learning approach will facilitate students in the formulation and implementation of appropriate interventions in the management of clients experiencing illness. Students are expected to develop knowledge and skill appropriate for a graduate nurse at the beginning level; Critique of evidenced based nursing: A functional health patterns approach will be used as organising framework for client assessment; and Factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in acute medical/surgical settings.

HNB3251 NURSING THEORY 8: (ELECTIVE) ACUTE CARE

Campus St Albans

Prerequisite(s) Nursing Practice 7: Acute Care

Content The content of this subject will be organised around the Functional Health Patterns, in particular: Cognition & Perception (neurological dysfunction complex pain); Nutrition and metabolism (endocrine disorders complex wounds). This subject will cover the nursing management of patients in the acute care setting including: Comorbidities, complex acute or chronic illnesses, including the management of patients with multiple sclerosis, autoimmune, endocrine disorders (excluding diabetes), advanced cardiac conditions, spinal injuries and infectious diseases in acute care settings; Focused assessment, planning, implementation and evaluation of nursing interventions of patients with complex care needs and their significant others; Complex wound assessment and interventions; Chronic or complex pain assessment and management; The helping role of the nurse; A problem based learning approach will facilitate students in the formulation and implementation of appropriate interventions in the management of clients experiencing illness. Students are expected to develop knowledge and skill appropriate for a graduate nurse at the beginning level; Critique of evidenced based nursing: A functional health patterns approach will be used as organising framework for client assessment; and Factors such as cultural and indigenous issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in acute medical/surgical settings.


Recommended Reading


Subject Hours Equivalent of 40 hours.

Assessment Case study assignment (2000 words) – 50%. Project (2000 words.) 50%

HN3252 CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE
Campus St Albans
Prerequisites HNB 3105 Nursing Theory 7: Acute Care, HNB 3106 Clinical Practicum 7: Acute Care
Co-requisites Nil

Learning Outcomes On completion of this subject, students should be able to:

• Demonstrate the application of knowledge acquired through related theoretical and skills based subjects;

• Adapt knowledge of health assessment procedures to the individualized care requirements of clients in the acute care setting;

• Perform safe and competent nursing care in accordance with the ANCI Competencies (1998), and consistent with level of knowledge and performance required of a graduate nurse at beginning level;

• Develop individualized nursing care plans for clients acknowledging physical/mental condition, communication skills, socio-cultural or indigenous background and developmental stage;

• Apply the principles of occupational health and safety and infection control to all aspects of health care delivery;

• Apply knowledge of communication skills to all aspects of the clinical experience, and demonstrate appropriate interpersonal skills with clients, families, and healthcare personnel;

• Demonstrate knowledge of pharmacological agents such as route of administration, distribution, metabolism, common side effects and excretion;

• Apply legal and ethical principles to the holistic health care requirements of clients;

• Participate in reflective practice process through documentation, discussion and self-evaluation of learning experiences both on campus and in the clinical setting and the relationship between these experiences;

• Critically apply relevant theoretical concepts from related areas of study in the analysis of nursing situations; and

• Participate in client education and provide information regarding the availability of community resources for persons requiring assistance on discharge or transfer.

Content Utilising experience from the previous acute care placement, students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in an acute medical/surgical setting and be capable of planning implementing and evaluating care with minimal supervision. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANCI Competencies will be used as an assessment framework by preceptors and clinical instructors. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. A debriefing session once or twice a week will provide an opportunity to share and reflect on their progress with their peers. Client-student ratios will be graduated throughout the placement and numbers will depend upon the level acuity.

Required Reading


Recommended Reading


Class Contact
140 hours of clinical experience

Assessment In order to be awarded a satisfactory grade for this subject, the student must successfully complete each of the following:

• Satisfactory performance of holistic assessment of one client, as demonstrated by case planning documentation;

• Demonstration of competence in skills in line with those required for a graduate nurse at beginning level, in line with the ANCI competencies (1998);

• Satisfactory participation in reflective practice, as defined by completion of personal learning objectives and reflective journal entries during each week of clinical placement; and

• Demonstration of safe and competent practice in line with that required for a graduate nurse at beginning level, and in line with the ANCI competencies (1998).

Final assessment: Satisfactory / Unsatisfactory

HN3271 NURSING PRACTICE 8 ACUTE CARE
Campus St Albans
Prerequisites Nursing Practice 6: Health of the Community, Clinical Practicum 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practicum 7: Mental Health and Illness, Nursing Practice 8: Child and Family Health and Clinical Practicum 8: Child and Family Health
Co-requisites Nil

Learning Outcomes On completion of this unit, students should be able to: apply problem based learning skills to the identification of nursing problems, appropriate interventions and prioritisation of care for clients in the medical/surgical setting; demonstrate knowledge of the relevant pharmacological agents used to treat clients with altered function of specified body systems; demonstrate competence in selected nursing skills related to clients experiencing medical/surgical conditions and an understanding of underlying pathophysiology and possible complications of medical conditions and those requiring surgical intervention; apply appropriate occupational health and safety protocols including knowledge of infection control in medical/surgical settings; incorporate relevant theoretical concepts from the associated units into the analysis of client care the acute medical/surgical setting; apply comprehensive client assessment skills relevant to conditions; integrate and apply appropriate theoretical and clinical knowledge to the delivery of health care to clients experiencing illness at beginning graduate nurse level; identify the relevant ethical and legal issues associated with nursing clients experiencing medical/surgical problems; evaluate patient education related to clients experiencing illness; and demonstrate increasing ability to apply critical reasoning in the care of clients with acute medical/surgical conditions.

Content This unit will cover the nursing management of acute and chronic conditions. The unit uses both an integrated and an aligned approach, establishing clear links to all topics covered over previous semesters. Using a problem based learning approach students will be facilitated in the formulation and implementation of appropriate interventions in the management of clients experiencing illness. Students are expected to develop knowledge and skill appropriate for a graduate nurse at beginners level. Factors such as cultural issues, legal and ethical issues, communication skills, and organisational factors will also be considered in the analysis of client care in acute
medical/surgical settings. A systems approach will be used as an organizing framework for client assessment.


Self-testing exercises online (not assessment: Ungraded (Satisfactory/Unsatisfactory) The student's

situation: 20% Utilising the case study client in a simulated setting, the exercise will assess the student's ability to integrate the relevant set topic areas)


Class Contact Equivalent of 40 hours organised according to teaching mode used.

Assessment Problem based learning (PBL) exercise x 1: 20% This exercise will assess the student’s ability to integrate the relevant theoretical concepts and problem based learning skills to a case study of a client requiring acute care intervention.Simulated patient care situation: 20% Utilising the case study client in a simulated setting, the student will be required to demonstrate competence in assessment and prioritisation of the client’s health care needs. Skills performance assessment: Ungraded (Satisfactory/Unsatisfactory) The student’s achievement of competence in the selected clinical skills will be assessed in the simulated setting prior to the commencement of the first acute care clinical placement. Self-testing exercises online (not graded) A number of self-testing exercises related to clinical skill and knowledge development will be placed online using WebCT to assist student preparation and learning. Examination: 60% The student’s ability to demonstrate an understanding of knowledge, and to apply it to various acute care situations will be assessed. Students’ comprehension and analytical skills will be assessed through the interpretation of specific case studies, requiring explanation and prioritisation of client management and with due regard to the role of other health care professionals.

HN3272 NURSING PRACTICE 8 MENTAL HEALTH & ILLNESS

Campus St Albans

Prerequisites Nursing Practice 6: Health of the Community, Clinical Practice 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practice 7: Mental Health and Illness, Nursing Practice 8: Child and Family Health and Clinical Practice 8: Child and Family Health

Co-requisites Learning Outcomes This unit is designed to provide students with an opportunity to:

Understand the theoretical background and principles of cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management

Appraise the interprofessional use of cognitive behaviour therapy in mental health

Develop beginning skills in the cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management

Explore contemporary relevant research in cognitive behaviour therapy, group therapy, prevention and management of aggression, and case management

Develop an understanding of mental health policy and issues related to mental health service provision

Content Related mental health and illness research Cognitive behavioural therapy Group therapy Prevention and management of aggression Case management Mental health policy


Recommened Reading American Psychiatric Association (2000). Diagnostic and statistical manual of mental disorders DSM-IV-TR.


FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Assessment Case management study, comprising: interview and assessment 40% (1900-2100 words); u Case management report 60% (2800-3000 words)

HNB3273 NURSING PRACTICE 8 HEALTH & ILLNESS IN OLDER ADULTS
Campus St Albans
Prerequisites Nursing Practice 6: Health of the Community, Clinical Practice 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practice 7: Mental Health and Illness, Nursing Practice 8: Child and Family Health and Clinical Practice 8: Child and Family Health

Co-requisites

Learning Outcomes On completion of this unit, students should be able to:

• appreciate and promote a positive view of ageing;
• differentiate between changes associated with the ageing process with pathology when assessing clients and managing nursing care across a variety of health care contents;
• consider major psychological and pathophysiological changes potentially encountered by ageing individuals; and
• comprehend and apply appropriate practice frameworks for individuals in the community, sub-acute and residential gerontic nursing practice.

Content

The physiological and psychosocial consequences of changes for physical and mental health for older people;

Implications for the special needs of older people for assessment and clinical decision making;

Assessment considerations including use of specific assessment tools, Refinement of clinical assessment skills,
The clinical management of common issues experienced by older people for example management of pain, bowel management, promotion of urinary continence, polypharmacy;

Required Reading


Recommended Reading


Content

Utilising experience from the previous acute care placement, students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in an acute medical/surgical setting and be capable of planning implementing and evaluating care with minimal supervision. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANCI Competencies will be used as an assessment framework by preceptors and clinical instructors. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. A debriefing session once or twice a week will provide an opportunity to share and reflect on their progress with their peers.

Client/student ratios will be graduated throughout the placement and numbers will depend upon the level acuity.

Required Reading


Recommended Reading


Recommended Reading


Content

Utilising experience from the previous acute care placement, students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in an acute medical/surgical setting and be capable of planning implementing and evaluating care with minimal supervision. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANCI Competencies will be used as an assessment framework by preceptors and clinical instructors. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. A debriefing session once or twice a week will provide an opportunity to share and reflect on their progress with their peers.

Client/student ratios will be graduated throughout the placement and numbers will depend upon the level acuity.

Required Reading


Recommended Reading


Recommended Reading


Content

Utilising experience from the previous acute care placement, students will be expected to develop an increasingly independent role in the delivery of nursing care to clients in an acute medical/surgical setting and be capable of planning implementing and evaluating care with minimal supervision. Students will be supervised by clinical teachers and/or preceptors during this period of experiential learning. The ANCI Competencies will be used as an assessment framework by preceptors and clinical instructors. Reflective practice will be encouraged in order to enable students to critically evaluate their clinical practice. A debriefing session once or twice a week will provide an opportunity to share and reflect on their progress with their peers.

Client/student ratios will be graduated throughout the placement and numbers will depend upon the level acuity.
SCHOOL OF NURSING AND MIDWIFERY


HNB3275 CLINICAL PRACTICUM 8 MENTAL HEALTH & ILLNESS

Campus St Albans

Prerequisites Nursing Practice 6: Health of the Community, Clinical Practice 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practice 7: Mental Health and Illness, Nursing Practice 8: Child and Family Health and Clinical Practice 8: Child and Family Health

Co-requisites

Learning Outcomes Students will be provided with opportunities to practise a range of mental health nursing skills, including:

- Observing and participating in psychotherapeutic approaches to care, such as cognitive behaviour therapy, and group therapy
- Observing and assisting in the prevention and therapeutic management of aggression;
- Observing and participating in case management
- Reflecting on his or her practices in the prevention and management of aggression
- Developing an understanding of mental health policy and issues related to mental health service provision

Content Students will undertake 140 hours of clinical practice and engage in reflective practice with a mentor.


HNB3276 CLINICAL PRACTICUM 8 HEALTH & ILLNESS OLDER ADULTS

Campus St Albans

Prerequisites Nursing Practice 6: Health of the Community, Clinical Practice 6: Health of the Community, Nursing Practice 7: Mental Health and Illness, Clinical Practice 7: Mental Health and Illness, Nursing Practice 8: Child and Family Health and Clinical Practice 8: Child and Family Health

Co-requisites

Learning Outcomes On completion of this unit, students should be able to:

- Analyse the impact positive aging has on the community
- Be able to categorise the risks associated with aging from psychological, physiological and sociological aspect
- Demonstrate competency in assessment of the older adult congruent with the aging process and altered pathology
- Develop individualized care plans acknowledging physical, mental, communication and cultural considerations ina variety of settings. (These will include community, acute care, sub acute care and residential care)
- Participate in education of the client and their significant others in the promotion of healthy aging
- Develop strategies for continuous improvement in the care and empowerment of the older person.

Content The student will undertake 140 hours of clinical practice and engage in reflective practice with a mentor.

Required Reading Ebersole & Hess (2001). Geriatric nursing & health ageing, Mosby-St Louis


Class Contact 140 hours of clinical experience, comprising of five days per week, seven hours per day for six weeks.

Assessment Achievement of clinical competencies (Ungraded: Pass/Fail)
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Learning Outcomes Students will be expected to:
• Develop an understanding of the general principles of pharmacology as they relate to midwifery practice;
• Have an appreciation of the legal, ethical, moral and sociocultural considerations pertaining to the drug administration responsibilities of midwifery;
• Explain the principles of pharmacological interventions in the care of being with woman;
• Discuss safety and efficacy issues of medications pertaining to childbearing women;
• Apply evidence-based knowledge to midwifery practice; and,
• Discuss the relationship of conventional drug therapy to non-pharmacological and complementary therapies in the care of individuals.

Content: General principles of pharmacology;
• Individual responses to medications;
• Principles and guidelines for storage, checking, administration and documentation of medications;
• Legal and ethical principles of drug administration;
• Quality use of medications including safety and efficacy issues;
• Medication use across the lifespan and polypharmacy;
• Sociocultural factors influencing drug therapy;
• Adverse drug reactions and interactions;
• The role of midwives in education and medication therapeutic intervention; and,
• Exemplars of commonly-used drug groups.


Class Contact Equivalent of 56 hours

Assessment 1% hour examination: 40% Written critique on Quality Use of Medicines (2500 words): 60% Drug Calculation Test: Satisfactory / Unsatisfactory

HNG5001 ISSUES AND POLICIES IN PROFESSIONAL PRACTICE

Campus St Albans, Off Campus

Prerequisite(s) Nil

Content The content of the subject includes the dynamic health care system; regulation and policy development on nursing practice; the nature of the health care system, including responsibility for the development of neophytes, collegiality and body of nursing knowledge; and a range of environmental influences that impact on the health of communities.


Subject Hours Three hours per week for one semester comprising one 2-hour lecture and one hour tutorial/workshop/group discussion.

Assessment Presentation 40%; written assignment 60% (3000 words)

HNG5003 GERONTO SPECIALISATION 3

Campus St Albans

Prerequisite(s) HNA 5001 and HNA 5002

Content: As there are a variety of role expectations of advanced gerontic nurse practitioners, it is imperative that each student determines the clinical learning required to achieve expertise in clinical gerontic nursing. As each student’s learning experience at the time of entry to this subject is seen as unique and dynamic, this unit recognises the need for self-determination of learning modalities. The content includes students’ exploration of the diversity of the clinical environment in specialised gerontic nursing practice; role of the advanced gerontic nurse practitioner: leader, manager, educator, researcher, and collaborative consultant in the health care team. Students are expected to spend their clinical practicum in a related area but outside their current clinical practice, to further expand their clinical learning experience. Students select the related clinical practicum. Then students prepare a written contract of the clinical practicum they wish to undertake, before they set out to achieve their contract practicum. The written contract should also include a projected clinical project which forms the clinical outcome. The contract is written in collaboration with the appropriate lecturer.


Assessment 1% hour examination: 40% Written critique on Quality Use of Medicines (2500 words): 60% Drug Calculation Test: Satisfactory / Unsatisfactory

**Subject Hours** 7 hours seminar work 32 hours clinical learning experience.

**Assessment** Contract with facilitator: hurdle requirement ungraded.

Students are required to submit a written contract of the clinical learning experience they wish to undertake before they set out to achieve their contractual clinical learning. Clinical Project: 80% (3000-3500 words); Clinical Reflective Journal: 20% (1000-1500 words)

**HN6120 CLINICAL PROJECT**

**Campus** St Albans

**Prerequisite(s)** Completion of one Group A subject, one Group B subject and an approved elective, or equivalent.

**Content** This clinical project is intended to allow the student to pursue his/her area of study in the clinical setting. The student will be required to define the focus of the study (such as physiological healing, pain management, continuity management or managing change in clinical practice), identify relevant aims and objectives, arrange study placement and conduct the study. The project will include evaluation of the nursing care and reflection on this, as part of the ongoing process of evaluation of nursing practice in care of the older person. It is expected that a current literature review and outcomes of the study, together with the evaluation of the study will be included.

**Required Reading** To be advised by lecturer.

**Subject Hours** The project will be undertaken in consultation with the Course Co-ordinator.

**Assessment** The project will include a written paper of not more than 7500 words and be a piece of scholarly work.

**HNH4101 INQUIRY INTO NURSING KNOWLEDGE**

**Campus** St Albans

**Prerequisites** Nil

**Co-prerequisites** Nil

**Learning Outcomes** On completion of this subject, students will be able to:

- Display an understanding of nursing theories.
- Identify the relationship between nursing theory, nursing practice and research.
- Develop skills in generating nursing knowledge through the process of theory analysis and development.

**Content** This subject is designed to encourage students to examine critically some of the theories and ideologies that influence the development of the various kinds of knowledge. The subject also aims to enable students to generate and apply nursing knowledge through the process of theory analysis and development. Topics covered in this subject include: intellectual culture – contextual knowledge; the nature, creation and legitimation of knowledge; nursing ‘knowledge’; nursing theories and their application to practice; future directions.

**Required Reading**

**Recommended Reading** Benner, P. 1984, From Novice to Expert: Excellence and Power in Clinical Nursing Practice, Menlo Park, California.


**Class Contact** 36 hours per semester.

**Assessment** Seminar presentation, 50%; Written paper, 50%. (2500 words)

**HNH4102 ADVANCED QUANTITATIVE RESEARCH METHODS**

**Campus** St Albans

**Prerequisites** HNR 0001 Introduction to Research Design and Methods

**Co-requisites** Nil

**Learning Outcomes** Students will develop necessary skills to successfully select, design, conduct, analyse and write up a small-scale quantitative research study.

**Content** This subject provides a detailed examination of advanced quantitative methodologies, design and analyses as key elements of the research process, with an emphasis on the importance of experimental design and statistical decision making. The subject covers such topics as: the general linear model, analysis of variance and covariance, statistical power, multivariate designs including: multiple regression analyses, multivariate analysis of variance, and factor analysis. The subject also introduces students to the use of nonparametric data analyses and underlying reasons for choosing nonparametric over parametric statistical tests. Students will also receive practical experience in data analysis using the SPSS x computer package, however, the focus of the course will be on statistical analyses as a part of the total research process.


**Recommended Reading**

**Class Contact** 36 hours comprising two hour seminar and one hour tutorial per week for one semester.

**Assessment** Research proposal or critique (50%); (2500 words)

Data analysis project (50%). (2500 words)

**HNH4103 ADVANCED QUALITATIVE RESEARCH METHODS**

**Campus** St Albans

**Prerequisites** HNR 0001 Introduction to Research Design and Methods

**Co-requisites** Nil

**Learning Outcomes** Students will develop the necessary skills to successfully select, design, conduct, analyse and write up a small-scale qualitative research study.

**Content** This subject provides students with advanced knowledge and skills in qualitative research methodologies and procedures. Topics include

- Major paradigms and theoretical perspectives of qualitative research.
- Major qualitative research methodologies e.g. ethnography, grounded theory, phenomenology, poststructural / critical research, action research.
- Advanced skills in data collection including participant and non-participant observational strategies, individual and group interviewing techniques, and unobtrusive strategies such as document analysis;
- Using computers in qualitative data analysis;
- Credibility and trustworthiness and ethical issues;
- Writing up of qualitative research.

**Required Reading**

**Recommended Reading**

**HNH 001 Introduction to Research Design and Methods**


**Recommended Reading**

**Class Contact** 36 hours comprising two hour seminar and one hour tutorial per week for one semester.

**Assessment** Seminar paper on research design of a proposed project (50%); A written report on the process of data collection and analysis (50%). (2500 words)
HNH4200 MINOR THESIS (FULL TIME)
Campus St Albans
Prerequisites HNH4101 Inquiry into Nursing Knowledge; HNR0001 Introduction to Research Design and Methods and HNH4103 Advanced Qualitative Methods or HNH4102 Advanced Quantitative Methods
Co-requisites Nil
Learning Outcomes The student will develop the necessary skills to successfully select, design, conduct and analyse and write up a minor research thesis.
Content The minor thesis is intended to provide students with an opportunity to undertake independent enquiry into an area of personal interest and applicable to the profession of nursing. The thesis will be a research paper of not less than 10,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates a student’s ability to clearly define a problem, to undertake a detailed literature search and review the relevant theoretical and practical literature on the topic area. Good data selection, collection and analysis skills should also be demonstrated. The thesis should involve a high standard of written communication skills. The topic, which is chosen, should allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduction of the research. Course regulations guiding the conduct and supervision of the research will be developed in the Course Rules and Regulations and will reflect the regulations to be developed by the Faculty Graduate Studies Research Committee.
Required Reading To be advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact Students will meet with a supervisor on a regular basis.
Assessment A thesis of a minimum of 15,000 words and maximum of 20,000 words.

HNH4201 MINOR THESIS (PART TIME)
Campus St Albans
Prerequisites HNH4101 Inquiry into Nursing Knowledge; HNR0001 Introduction to Research Design and Methods and HNH4103 Advanced Qualitative Methods or HNH4102 Advanced Quantitative Methods
Co-requisites Nil
Learning Outcomes The student will develop the necessary skills to successfully select, design, conduct and analyse and write up a minor research thesis.
Content The minor thesis is intended to provide students with an opportunity to undertake independent enquiry into an area of personal interest and applicable to the profession of nursing. The thesis will be a research paper of not less than 10,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates a student’s ability to clearly define a problem, to undertake a detailed literature search and review the relevant theoretical and practical literature on the topic area. Good data selection, collection and analysis skills should also be demonstrated. The thesis should involve a high standard of written communication skills. The topic, which is chosen, should allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduction of the research. Course regulations guiding the conduct and supervision of the research will be developed in the Course Rules and Regulations and will reflect the regulations to be developed by the Faculty Graduate Studies Research Committee.
Required Reading To be advised by lecturer.
Recommended Reading To be advised by lecturer.
Class Contact Students will meet with a supervisor on a regular basis.
Assessment A thesis of a minimum of 15,000 words and maximum of 20,000 words.

HNH4313 MINOR THESIS B (PART-TIME)
Campus St Albans
Prerequisite(s) HNH4312 Minor Thesis A; or equivalent.
Content The minor thesis is intended to provide students with an opportunity to undertake independent enquiry into an area of personal interest and applicable to the profession of nursing. The thesis will be a research paper of not less than 10,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates a student’s ability to clearly define a problem, to undertake a detailed literature search and review the relevant theoretical and practical literature on the topic area. Good data selection, collection and analysis skills should also be demonstrated. The thesis should involve a high standard of written communication skills. The topic which is chosen should allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduction of the research. Course regulations guiding the conduct and supervision of the research will be developed in the Course Rules and Regulations and will reflect the regulations to be developed by the Faculty Graduate Studies Research Committee.
Required Reading To be advised by lecturer.
Subject Hours To be arranged with supervisor.
Assessment A thesis of a minimum of 10,000 words and maximum of 20,000 words.

HNH4314 MINOR THESIS B (FULL-TIME)
Campus St Albans
Prerequisite(s) HNH4312 Minor Thesis A; or equivalent.
Content The minor thesis is intended to provide students with an opportunity to undertake independent enquiry into an area of personal interest and applicable to the profession of nursing. The thesis will be a research paper of not less than 10,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates a student’s ability to clearly define a problem, to undertake a detailed literature search and review the relevant theoretical and practical literature on the topic area. Good data selection, collection and analysis skills should also be demonstrated. The thesis should involve a high standard of written communication skills. The topic which is chosen should allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduction of the research. Course regulations guiding the conduct and supervision of the research will be developed in the Course Rules and Regulations and will reflect the regulations to be developed by the Faculty Graduate Studies Research Committee.
Required Reading To be advised by lecturer.
Subject Hours To be arranged with supervisor.
Assessment A thesis of a minimum of 10,000 words and maximum of 20,000 words.

HNH4312 MINOR THESIS A
Campus St Albans
Prerequisite(s) Nil
Content The aim of this subject is to provide students with the opportunity to plan for successful conduction of research. The major emphasis of this subject will focus on the planning and development of the research proposal. The topics covered in this subject will result from negotiation between the student and the supervising lecturer and will be influenced by the needs of individual students. Topics which are expected to be considered include the role of a literature review, how to clarify a research problem, method(s) of inquiry relevant to the problem and writing a research proposal.

Required Reading Nil
Subject Hours Students will meet with a supervisor on a regular basis. The nature of the work required could be estimated as equivalent to three contact hours per week.
Assessment Research proposal.

HNH4310 MINOR THESIS B
Campus St Albans
Prerequisite(s) HNH4312 Minor Thesis A; or equivalent.
Content The minor thesis is intended to provide students with an opportunity to undertake independent enquiry into an area of personal interest and applicable to the profession of nursing. The thesis will be a research paper of not less than 10,000 words and not more than 20,000 words. It will report on independently conducted research which demonstrates a student’s ability to clearly define a problem, to undertake a detailed literature search and review the relevant theoretical and practical literature on the topic area. Good data selection, collection and analysis skills should also be demonstrated. The thesis should involve a high standard of written communication skills. The topic which is chosen should allow the candidate to develop a methodology and to apply it to an appropriate problem or situation. It is intended that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduction of the research. Course regulations guiding the conduct and supervision of the research will be developed in the Course Rules and Regulations and will reflect the regulations to be developed by the Faculty Graduate Studies Research Committee.
Required Reading To be advised by lecturer.
Subject Hours To be arranged with supervisor.
Assessment A thesis of a minimum of 10,000 words and maximum of 20,000 words.

HNH2010 PRACTICE ALLEGIANCES
For continuing students only
Campus St Albans
Prerequisite(s) Nil
Corequisite(s) JAC0216 With Woman: Rethinking Pain.
Content All students will follow through in a care capacity a minimum of ten women experiencing childbirth. Assessment: assessment of the woman; Culture & Family; Pain Assessment; Fetal Assessment; Progress of the birth process; Support structures; Environment. Midwifery care in partnership with birthing women: Comfort; Orientation to environment; Partnership, dignity and respect; Support and position; Mobilization; Pharmacological methods of pain control; Non pharmacological methods of pain control; Support; Communication; Counselling; Partnership with woman. Hygiene: Showers Bathing, Perineal care, Mouth & hand washing. Nutrition & Elimination: Breastfeeding with emphasis on providing extra support; Fluid balance; Energy; IV Infusion & Infusion Pumps; Urinalysis. Ethico-Legal Issues: Documentation; Informed Consent; Maintenance of Dignity, privacy and respect; Research component of the Scope of midwifery practice; Advocacy; Loss. Environment: Technology;
Maternity Team. Obstetrical Matters: Induction of labour; Instrumental birth; Mal presentations; Epidural Anaesthesia; Episiotomy & Repair of perineum; Principles of asepsis.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** A practice subject of 208 hours for one semester.

**Assessment** Practice assessment based on ACMI competency standards. Partnership log, focussing on contact and follow-through of women Reflective journal.

### HNM2020 TOWARDS A MIDLIFE SELF

For continuing students only

**Campus St Albans**

**Prerequisite(s)** Nil

**Content** All students will ‘follow through’ in a care capacity within a maternity unit, a minimum of ten women experiencing childbirth. Emphasis on: reflection on self and the experiences that influence the development of the concept of self; application of skills and techniques for the development of effective interpersonal relationships in midwifery. Continuing to develop: personal and professional philosophies and how they influence one’s perception of midwifery as well as the midwives’ role and function; carving a new identity: going from a known world to an unknown world; connecting with the passion of midwifery. Exploring strategies by sub-theme: Ballie Tindall. Stables, D. (1999). Physiology in childbearing. In partnership with women: work with a variety of women’s transition from pregnancy to parenthood; work with women in a variety of settings and models including as a ‘named’ midwife.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** A practice subject of 208 hours for one semester.

**Assessment** Practice assessment based on ACMI competency standards. Partnership log, focussing on contact and follow-through of women and reflective journals.

### HNM3010 NAVIGATING CHILDBEARING OBSTACLES

For continuing students only

**Campus St Albans**

**Prerequisite(s)** Nil

**Content** All students will ‘follow through’ in a care capacity within a maternity unit, a minimum of five women with obstacles in childbearing. Care and assessment during pregnancy, labour and birth and after birth: assessment for malpresentation and malposition; Conduct vaginal examination; Artificial rupture of membranes; Episiotomy and perineal care; Breastfeeding problems; Dynamap and blood pressure monitoring; Blood sugar monitoring. Use of technology: Ultrasound sound; Cardiograph monitoring; Oestriol monitoring; Central Venous Pressure (CVP) monitoring; Epidural infusions and care; Intravenous therapies; Syntocinon infusion in therapy; Magnesium sulphate infusion; IV antibiotics; IVAC pumps. Collaborative and referral role of the midwife. Assist in Obstetrical intervention; Induction of labour; Forceps birth; Ventouse birth; Caeserian Birth and care. Ethico-legal issues: Informed consent; Rights of the woman. Use of technology. Principles of primary level counselling.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** A practice subject of 108 hours for one semester.

**Assessment** Practice assessment based on ACMI competency standards. Partnership log, focussing on contact and follow-through of women and reflective journals.

### HNM3011 WOMEN’S HEALTH PRACTICE

For continuing students only

**Campus St Albans**

**Prerequisite(s)** Nil

**Content** Within a framework of working with woman in partnership, the role of the midwife providing primary and collaborative care for women throughout the reproductive lifespan will be explored under the several subheadings. Undertaking a comprehensive women’s health assessment. Guidelines for practice and skill development. Primary care midwife promoting women’s wellness: strategies for promoting; breast awareness and mammography screening (mammocheck program); regular cervical screening; healthy diet; regular weight bearing exercise, pelvic floor exercises. Midwife providing women’s centred collaborative care in the acute care setting: Physical and psychological pre and post operative considerations; Caring for women experiencing diagnostic & therapeutic procedures for reproductive and urinary conditions reflecting the specific care requirements; Caring for women experiencing diagnostic & therapeutic procedures for breast related conditions reflecting the specific care requirements; Caring for women experiencing treatment for cancers of the reproductive or breast related conditions; Consequences of chemotherapy to be taken into consideration when planning care for women. Caring for women experiencing diagnostic & therapeutic procedures for breast related conditions reflecting the specific care requirements; Caring for women experiencing treatment for cancers of the reproductive or breast related conditions; Consequences of chemotherapy to be taken into consideration when planning care for women.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** A practice subject of 108 hours for one semester.

**Assessment** Practice assessment based on ACMI competency standards. Partnership log, focussing on contact and follow-through of women and reflective journals.

### HNM3020 WORKING WITH BABIES

For continuing students only

**Campus St Albans**

**Prerequisite(s)** Nil

Content Neonatal Nurseriy Environment: Cots; Oxygen saturation equipment; Assisted Ventilation Equipment; Monitors; Stress management strategies. Care of the baby: Gestational, physical & psychological assessment; Facilitation of Growth & Development; Stimulation; Rest; Touch; Comfort; pain control; Position; Kangaroo Care; Oxygenation; Resuscitation; Oxygen therapy; CPAP; Surfactant Therapy; Oxygen saturation; Blood gases; Nutrition & Elimination; Breast feeding – expand on previous knowledge; Gastric feeds; IV therapy; Breast milk substitutes; Fluid Balance & electrolytes; Specimen collections; Phototherapy; Immunity; Universal precautions; Hygiene; Temperature; Neutral thermal environment. Care of the family: Support & counselling; Involvement in care and decision making; Education; Transition to parenthood; Transition from hospital to home.

Required Reading To be advised by subject lecturer.


Subject Hours A practice subject of 208 hours for one semester.

Assessment Practice assessment based on ACMI competency standards. Partnership log, focusing on contact and follow-through of sick baby; reflective journals.

HNM3021 INDEPENDENT LEARNING UNIT

For continuing students only

Students will be expected to: Campus

Prerequisites

Co-requisites

Learning Outcomes

• Plan a learning contract which will act as a guide for learning strategies and activities for a particular area relating to midwifery practice;
• Develop strategies, where appropriate, to demonstrate increased expertise in a particular area of midwifery;
• Prepare an outline of their topic which can be used as a basis for group presentation and discussion;
• Core graduate attributes to be achieved by students are:
• The subject will assist students to identify and solve complex problems related to professional practice, selecting from strategies appropriate to the discipline and reflecting on ethical issues;
• Students will be able to recognise when information is needed, and locate, evaluate, manage and use information correctly for a range of purposes.
• Students will synthesise moderately complex material and write in a range of styles at a level approximating employment entry level with guidance.
• All students will follow complex instructions and manage time with minimal guidance.
• The subject will see students apply and evaluate strategies relating to issues of social cultural diversity in professional practice, seeking information where necessary

Core

The learning contract of this unit will be negotiated by the student with the academic mentor. It is anticipated that extensive pre-reading relevant to the topic area will be required in order for the student to select an appropriate topic and complete a study plan, prior to undertaking the unit.

Required Reading


Class Contact

Assessment Achievement in this subject will be assessed by the development and completion of a learning contract.

HNM5006 NURSING MANAGEMENT 3

Campus St Albans

Prerequisite HNM5004 Nursing Management 1, HNM5005 nursing management 2

Content This subject provides students with the opportunity to explore, refine and expand expertise in clinical judgement, to critically examine the processes or strategies in use. It also aims to enable students to apply theoretical knowledge to the management of a ward/unit.


Subject Hours The equivalent of three hours per week for one semester organized according to the teaching mode used.

Assessment Presentation (equivalent 2000 words) 40%, Written Assignment (2500 to 3000 words) 60%


**Subject Hours**
The equivalent of three hours per week for one semester organised according to the teaching mode used.

**Assessment**
Written assignment 65% (2700-2900 words) Class presentation 35% Simulated interview and assessment activity (Ungraded: Pass/Fail)

**HNMS102 COGNITIVE BEHAVIOUR THERAPY IN SEVERE MENTAL ILLNESS 1**

**Campus** St Albans/Off-Shore

**Prerequisite(s)** Nil

**Content** Theoretical background of cognitive behaviour therapy; Principles of cognitive behaviour therapy in mental health; Critical analysis of the interprofessional use of cognitive behaviour therapy in severe anxiety and depression in mental health settings; Interprofessional application of cognitive behaviour therapy in people with severe anxiety and depression in mental health settings; Culturally sensitive cognitive behaviour therapy in the field of severe anxiety and depression; Consumer self-determination in cognitive behavioural therapy; Recovery focused cognitive behaviour therapy.


**Subject Hours** The equivalent of three hours per week for one semester organised according to the teaching mode used. 10 hours observation of the practice of cognitive behaviour therapy in a clinical setting.

**Assessment** Critical analysis paper 65% (2700-2900 words). Class presentation 35% Objective Simulated Clinical assessment (Ungraded: Pass/Fail)

**HNMS103 EVIDENCE BASED PRACTICE**

**Campus** St Albans/Off-Shore

**Prerequisite(s)** Nil

**Content** Accessing and using evidence based data bases; Appraising a systematic review of the literature; Utilise basic statistics for appraisal of systematic cases; Discussing ICN criteria, including statistical significance, chance probability, confidence intervals, pitfalls in analysis; Appraising the professional application of a meta analysis to an aspect of professional practice; Recovery from mental illness that enhances consumer self-determination and social connectedness; Culturally sensitive evidence based professional practice.


**Subject Hours** The equivalent of three hours per week for one semester organised according to the teaching mode used.

**Assessment** Essay about evidence based practice 35% (1800-2000 words). Appraisal of a systematic review of the literature on a nominated topic 65% (2700-2900 words).

**HNMS104 FIELDWORK: MENTAL HEALTH PRACTICE**

**Campus** St Albans/Off-Shore

**Prerequisite(s)** Nil

**Content** Student will undertake 120 hours of clinical practice and engage in reflective practice with a mentor. One 3-hour introduction to the subject.


**Subject Hours** Ideally, fieldwork should take place in a setting in which the student is not employed. In exceptional circumstances, the student may negotiate with the subject co-ordinator to undertake intern or work placement in his or her workplace. This is conditional upon the student providing satisfactory evidence that the subject objectives can be achieved in his or her workplace.

**Assessment** Case management study, comprising (a) Interview and assessment activity 40% (1900-2100 words); (b) Case management report
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

60% (2800-3000 words). Achievement of clinical competencies (Ungraded: Pass/Fail)

HN5105 ADVANCED CLINICAL & HEALTH ASSESSMENT (NURSING SPECIALISATIONS)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes
On completion of the subject, students should be able to perform an advanced health assessment, including:

- utilise concepts from a range of disciplines to obtain an advanced medical history relevant to their field of practice;
- assess clients' physical status utilising their understanding of the complications and consequences of disease processes;
- assessment of clients' mental and psychological states on the trajectory of their disease;
- appraise the role of culture and other variables in the formation and maintenance of people's health-related experiences, beliefs and practices;
- determine a clients' explanatory model as an integral part of their overall assessment;
- determine where there is a lack of congruence between their own explanatory model and that of their clients;
- evaluate the impact of lifestyle factors that may impact on a person's health, including diet, exercise, smoking, drug and alcohol use, work, leisure and sleep pattern; and
- critique emerging and potential health care literature for its application to client assessment.

Content
Determining congruence between client and professional Explanatory Models;
- Approaches to health assessment;
- Growth and measurement, physical examination techniques and equipment;
- Mental status assessment;
- Physical systems assessment, including the interpretation and integration of pathological results;
- Lifestyle practices and social situation assessment in relation to health needs;
- A Multicultural society – Australians of Aboriginal and non-Aboriginal heritage;
- The phenomenon of culture and maintenance of values;
- The diversity of health-related schema in Australian society: personalistic, naturalistic and biomedical; and
- The process of acculturation and partial acculturation.

Required Reading

Recommended Reading

Class Contact 36 hours
Assessment 50% Workbook 50% Case history and presentation

HN5107 CLINICAL STUDIES 1 (MEDICAL/SURGICAL NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes
On completion of this subject, it is expected that students will be able to:

- Apply analytical and creative approaches to acute medical and surgical nursing
- Participate in discipline related activities to further enhance their current knowledge
- Apply theoretical components of nursing knowledge to enable the provision of expert care to the acutely ill person
- Understand the impact of illness on the acutely ill person and be able to respond using a process of holistic nursing care.

Content
Advanced Respiratory Management:
- Respiratory anatomy, physiology and assessment
- Common respiratory diseases
- Oxygen therapy, humidification and pulse oximetry
- Management of Intercostal catheter and Underwater sealed drainage system
- Basic respiratory investigations
- BIPAP/CPAP
- Intubation
- Tracheostomy management
- Arterial blood gas interpretation

Management of a complex patient:
- Vital signs, including Glasgow Coma Scale and clinical markers
- Assessment of the acutely ill patient
- General post operative observations
- Management of a Central Venous Catheter
- Management of a seizure
- Adverse events related to mismanagement of complex patients
- Case studies/scenarios on cardiac, neurological, respiratory and surgical patients

Basic ECG Interpretations
- Conduction system
- Electrophysiology
- Introduction to electrocardiography
- Review of the normal ECG
- Dysthymia: VT and VF/ Atrial dysrhythmias
- AV blocks
- Escape rhythms
- Myocardial ischaemia and infarction patterns.

Required Reading

Recomnended Reading

Class Contact 36 hours
Assessment Group presentation of Nursing Management of one acute medical or surgical conditions discussed in this subject. 40% Written examination. 60%
Required Reading

Recommended Reading

Class Contact 36 hours per semester
Assessment
Clinical project: 60% (2500 – 3000 words)
Examination 30%
Clinical Reflective Journal 10% (1000 words)

Students must pass each component of the assessment, including the clinical journal, in order to pass this unit.

HNM5110 CLINICAL STUDIES 1 (PAEDIATRIC NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes
The Unit provides students with opportunities to develop as an advanced professional practitioner in paediatric nursing, to gain awareness of accountability and responsibility for maintaining standards and excellence in paediatric nursing practice, and to further develop and extend paediatric resources, approaches and strategies to clinical decision making.

Content
Topics include: perspective of paediatric nursing; human growth and development; advanced health assessment of the child and family; principles and practice of paediatric health assessment skills; pathophysiology and clinical assessment of the child/adolescent with endocrine, neurological, musculo-skeletal, respiratory, cardio-vascular, gastro-intestinal, renal, oncological and plastic disorders; paediatric surgery; principles of paediatric nursing research; impact of hospitalisation on the child and family; principles of managing children and families with special needs.

Required Reading

Recommended Reading

Class Contact 36 hours per semester.
Assessment
Clinical project 60% (2500 – 3000 words)
Examination 30% (oral presentation, multiple choice and short answer questions)

Clinical Journal 10% (1000 words)

Required Reading

Recommended Reading

Nil
Nil
Nil

Recommended Reading

HNM5111 ADVANCED CLINICAL & HEALTH ASSESSMENT (DIABETES EDUCATION AND MANAGEMENT)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes
On completion of the subject, students should be able to perform an advanced health assessment, including:
• utilise concepts from a range of disciplines to obtain an advanced medical history relevant to their field of practice;
• assess clients’ physical status utilising their understanding of the complications and consequences of disease processes;
• assess the role of culture and other variables in the formation and maintenance of people’s health-related experiences, beliefs and practices;
• determine a clients’ explanatory model as an integral part of their overall assessment;
• determine where there is a lack of congruence between their own explanatory model and that of their clients;
• evaluate the impact of lifestyle factors that may impact on a person’s health, including diet, exercise, smoking, drug and alcohol use, work, leisure and sleep patterns; and
• critique emerging and potential health care literature for its application to client assessment.

Content
• Determining congruence between client and professional Explanatory Models;
• Approaches to health assessment; Growth and measurement, physical examination techniques and equipment;
• Mental status assessment;
• Physical systems assessment, including the interpretation and integration of pathological results;
• Lifestyle practices and social situation assessment in relation to health needs;
• A Multicultural society – Australians of Aboriginal and non-Aboriginal heritage;
• The phenomenon of culture and maintenance of values;
• The diversity of health-related schema in Australian society: personalistic, naturalistic and biomedical; and
• The process of acculturation and partial acculturation.

Required Reading

Class Contact 36 hours per semester.
Assessment
Clinical project 60% (2500 – 3000 words)
Examination 30% (oral presentation, multiple choice and short answer questions)

Clinical Journal 10% (1000 words)
HNM5114 SUBSTANCE ABUSE STUDIES 1
Campus St Albans
Prerequisites Nil
Co-requisites Nil
Learning Outcomes At the completion of this unit the students will be able to:
• Analyse the value of selected models and theories of substance abuse;
• Examine patterns of substance abuse in selected sub-populations of the community; and
• Critically examine the students own belief system and values about substance abuse.
• Display an understanding of health promotion theories
• Identify health promotion principles and appropriate strategies to promote prevention in substance abuse
• Develop skills in planning, implementing and evaluating programs that target substance abuse prevention.

Content This unit provides the student with the opportunity to examine the theories and models that underpin past and current approaches to dealing with substance abuse. This unit also considers basic principles and practices in health promotion and prevention related to substance abuse. Current models related to health promotion and prevention principles related to harm minimisation will be considered with emphasis on the impact of substance use on individuals, families and communities. Each student will contract to develop and present a health promotion prevention program related to substance abuse.


Bryant, K. J., Windle, M. & West, S. (Eds) (1997). The science of addictive behaviors. Current models related to health promotion and prevention principles related to harm minimisation will be considered with emphasis on the impact of substance use on individuals, families and communities. Each student will contract to develop and present a health promotion prevention program related to substance abuse.

HNM5117 CLINICAL STUDIES 2 (MEDICAL/SURGICAL NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil
Learning Outcomes At the completion of this subject, it is expected that students will be able to:
• Apply analytical and creative approaches to acute medical and surgical nursing
• Participate in discipline related activities to further enhance their current knowledge
• Apply theoretical components of nursing knowledge to enable the provision of expert care to the acutely ill person
• Understand the impact of illness on the acutely ill person and be able to respond using a process of holistic nursing care.

Content Diabetes Care
• Pathophysiology of Diabetes type 1 and 2
• Oral hypoglycaemics and principles of insulin therapy
• Management of hypoglaemia
• Long term complications of diabetes
• Diet and nutrition
• Equipment and monitoring
• Gestational diabetes
• Infection control
• Ecological model of disease transmission
• Preventing infection
• Nosocomial infections
• Issues in infection control and prevention in hospitals
• Notifiable diseases
• Hand hygiene
• Communicable diseases

Wound management
• Anatomy and physiology of the skin
• Management of intact skin
• Physiology of normal wound healing
• Moist wound healing
• Product information and selection
• Pressure ulcers
• Skin tears
• Leg ulcers
• Acute surgical wounds, including dehisced wounds
• VAC dressings

Pain management
• Pathophysiology of pain
• Assessing pain
• Principles of acute pain management
• Patient controlled analgesia
• Chronic pain
• Palliative pain management.


Written examination. 60%

HNM5118 CLINICAL STUDIES 2 (ORTHOPAEDIC NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil
Learning Outcomes At the satisfactory completion of the unit, it is expected that students will be able to develop competence and excellence in orthopaedic nursing practice.

Content The content includes: ambulatory techniques and devices and the role of physiotherapy; principles and functions of Orthoses, and appropriate nursing assessment and intervention associated with specific orthoses; management in orthopaedic nursing and planned change in the health care system and its effects on orthopaedic nursing care; critical examination and analysis of orthopaedic nursing through fieldwork and current case studies; radiographic studies; multi-disciplinary team approach and communication; principles and methods of pain management in orthopaedic nursing; leadership in orthopaedic nursing; spinal cord injury; paediatric disorders; oncological processes; and metabolic bone diseases.

Recommended Reading


Learning Outcomes

- The Unit provides students with opportunities: to further expand on the knowledge acquired in Paediatric Nursing; to develop appropriate strategies and clinical teaching skills in the provision of education for the sick child/adolescent, parents', other siblings and staff and to develop skills and competence to function as an advanced paediatric nurse practitioner.
- Further topics include: principles of teaching and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analysis of paediatric nursing practice through fieldwork and current case studies; coping mechanism and strategies in the management of distress parents, psychosocial and cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.
- The Unit provides students with opportunities: to further expand on the knowledge acquired in Paediatric Nursing; to develop appropriate strategies and clinical teaching skills in the provision of education for the sick child/adolescent, parents', other siblings and staff and to develop skills and competence to function as an advanced paediatric nurse practitioner.
- Further topics include: principles of teaching and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analysis of paediatric nursing practice through fieldwork and current case studies; coping mechanism and strategies in the management of distress parents, psychosocial and cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.
- The Unit provides students with opportunities: to further expand on the knowledge acquired in Paediatric Nursing; to develop appropriate strategies and clinical teaching skills in the provision of education for the sick child/adolescent, parents', other siblings and staff and to develop skills and competence to function as an advanced paediatric nurse practitioner.
- Further topics include: principles of teaching and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analysis of paediatric nursing practice through fieldwork and current case studies; coping mechanism and strategies in the management of distress parents, psychosocial and cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.
- The Unit provides students with opportunities: to further expand on the knowledge acquired in Paediatric Nursing; to develop appropriate strategies and clinical teaching skills in the provision of education for the sick child/adolescent, parents', other siblings and staff and to develop skills and competence to function as an advanced paediatric nurse practitioner.
- Further topics include: principles of teaching and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analysis of paediatric nursing practice through fieldwork and current case studies; coping mechanism and strategies in the management of distress parents, psychosocial and cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.

Content

- Epidemiology and pathophysiology of Diabetes Mellitus
- Gross physiology relating to Diabetes Mellitus with emphasis on the:
- liver and pancreas;
- insulin, glucagon and the counter regulatory hormones; and
- autoimmune responses.
- Cellular metabolism of lipids, carbohydrates and proteins
- Changes in physiology relating to exercise, with focus on impact to metabolic functions
- Types of diabetes
- Aetiology of diabetes complications including hypoglycaemia, diabetic ketoacidosis and hyperosmolar non-ketotic coma
- Problems related to Glycaemic control including Hba1c
- Oral hypoglycaemic agents and insulin regimes
- Issues on diet and exercise in the management of diabetes
- Diabetes microvascular and macrovascular complications, its prevention
- diabetes foot and peripheral arterial diseases
- Neuropathy and renal complications
- Eye disease in diabetes

Required Reading


Required Reading


Assessment

- Examination consists of 50 multiple choice questions and short answer questions (2 hours) 50% Workbooks/tutorial reports 50%

SCHOOL OF NURSING AND MIDWIFERY
HNM5124 SUBSTANCE ABUSE STUDIES 2
Campus St Albans
Prerequisites Substance Abuse Studies 1
Co-requisites Nil
Learning Outcomes On completion of this unit, students will be able to:
- Analyse the value of selected treatment modalities for substance abuse;
- Explore contemporary issues related to treatment of substance abuse;
- Examine non traditional treatment modalities of substance abuse and
  critically examine the legal and ethical context in which substance use and treatment occurs.
- Display an understanding of therapeutic communication theories.
- Identify counselling principles and strategies deal with clients with substance abuse problems.
- Develop skills in motivational interviewing.
Content The focus of this unit is to provide the student with the opportunity to examine the treatment models that underpin past and current approaches to dealing with substance abuse. This subject considers the skills and knowledge related to therapeutic communication with clients who have drug and alcohol problems. Counselling models related to dealing with substance abuse problems will be addressed, with specific focus on Motivational Interviewing. This subject has an emphasis on practical competencies for the student.
Class Contact Two hours lecture per week for 12 weeks = 24 hours
One-hour tutorial per week for 12 weeks = 12 hours
Total 36 hours
Assessment
HNM5131 DIABETES EDUCATION AND CLINICAL MANAGEMENT
Campus St Albans
Prerequisites Nil
Learning Outcomes From this subject the student should be able to:
- develop an appreciation of the diabetes educator’s client care management role within the health services industry;
- utilise an understanding of clients’ cultural and psychosocial characteristics and their physical needs in preparing a comprehensive and individualised health care management plan;
- demonstrate an understanding of a diabetes educators’ legal and ethical obligations in terms of both documentation and client care management;
- explain how the clinical approaches utilised by various disciplines (eg medicine, nursing, podiatry and pharmacy, endocrinology, diabetes educator) are complimentary in the development of comprehensive client care management plans;
- assess the potential impact on client care management when one or more of the above aspects of care are neglected.
Content
- Normal glycaemic control and blood glucose monitoring.
- Exercise programs as an integral part of diabetes management.
- Nutrition and dietary regimes of client care in diabetes management plan.
- Oral hypoglycaemic Agents.
- Options in insulin regimes.
- Living with diabetes, and how to develop a suitable individualised plan, with consideration given to the family dynamics, ethnicity and cultural practices.
- Early detection and prevention of diabetes complications.
- Strategies for dealing with acute and chronic complications.
- Client care management of special groups – children, adolescents, pregnant women, surgical patients and the elderly.
- Adult learning principles and psychology of learning and teaching.
- ADEA clinical framework for Diabetes Educators.
- Learning to teach.
Class Contact 36 hours
Assessment Examination comprises 50 multiple choice questions and short answer questions (2 hours) 50%
Management Portfolio (2500 words) 50%

HNM5134 ADVANCED CLINICAL & HEALTH ASSESSMENT (SUBSTANCE ABUSE STUDIES)
Campus St Albans
Prerequisites Nil
Co-requisites Nil
Learning Outcomes On completion of the subject, students should be able to:
- appraise the role of culture and other variables in the formation and maintenance of people’s health-related experiences, beliefs and practices;
- determine a clients’ explanatory model as an integral part of their overall assessment;
- determine where there is a lack of congruence between their own explanatory model and that of their clients;
- utilise concepts from a range of disciplines to obtain a medical history relevant to their field of practice;
- assess clients’ physical status utilising their understanding of the complications and consequences of disease processes;
- assessment of clients’ mental and psychological states on the trajectory of their disease;
- evaluate the impact of lifestyle factors that may impact on a person’s health, including diet, exercise, smoking, drug and alcohol use, work, leisure and sleep pattern;
- critique emerging and potential health care literature for its application to client assessment.
Content
- A Multicultural society – Australians of Aboriginal and non-Aboriginal heritage.
  - The phenomenon of culture and maintenance of values;
  - The diversity of health-related schema in Australian society: personalistic, naturalistic and biomedical;
  - The process of acculturation and partial acculturation;
  - Determining congruence between client and professional Explanatory Models;
  - Approaches to health assessment;
  - Growth and measurement, physical examination techniques and equipment;
  - Mental status assessment;
HNMS201 DIABETES CLINICAL INTERNSHIP

Campus St Albans

Prerequisites

Required Reading

Learning Outcomes

Content

Assessment 50% Assignment 2500 words. 50% Case history and presentation (20 minutes)

HNMS204 SUBSTANCE ABUSE CLINICAL INTERNSHIP

Campus St Albans

Prerequisites HNMS114 Substance Abuse Studies 1 and HNMS124 Substance Abuse Studies 2

Co-requisites Nil

Learning Outcomes

Content

Assessment 1 A satisfactory pass in clinical competency assessment as set out by the ADEA clinical guidelines (designed specifically for this area). The assessment will be conducted by the supervising Diabetes Educator.

HNMS209 CLINICAL STUDIES 3 (CLINICAL INTERNSHIP PAEDIATRIC NURSING)

Campus St Albans

Prerequisites Nil

Co-requisites Nil

Learning Outcomes

At the completion of this Unit, it is expected that students will be able to undertake significant responsibilities in the diverse role of an advanced paediatric nurse practitioner.
Content As there are a variety of role expectations of advanced paediatric nurse practitioners, it is imperative that each student determines the clinical learning required to achieve expertise in clinical paediatric nursing. As each student’s learning experience at the time of entry to this subject is seen as unique and dynamic, this unit recognises the need for self-determination of learning modalities. Therefore the content includes: the diversity of the clinical environment in specialised paediatric nursing practice; role of the advanced paediatric nurse practitioner: leader, manager, educator, researcher, and collaborative consultant in the health care team. Further, as per contact developed by the student in collaboration with a lecturer, students are expected to spend their clinical learning experience in a related area but outside their current clinical practice, to further expand their clinical learning experience to achieve expertise and skills as an advanced practitioner in paediatric nursing.


Class Contact 4 hours – seminar. 32 hours clinical learning experience.

Assessment a. Contract with supervisor : Hurdle requirement ungraded. Students are required to submit a written contract of the clinical learning experience they wish to undertake before they set out to achieve their contractual clinical learning.

b. Clinical Project: 80% (3000 – 3500 words)

c. Clinical Reflective Journal: 20% (1000 – 2000 words)


HNM5214 ADVANCED CLINICAL MEDICATION MANAGEMENT (SUBSTANCE ABUSE STUDIES) Campus St Albans

Prerequisites Nil

Co-requisites Nil

Learning Outcomes From this subject the student should develop an advanced understanding of the therapeutic use of drug therapy with reference to their specialised area of care.

Content Principles of pharmacotherapy, drug action - pharmacokinetics and pharmacodynamics

- Toxicology

- Illicit and licit Drugs related to substance abuse

- Medications summaries and drug interactions

- Assembling a treatment program

- Medication compliance and quality use of medicines

- Specialty based medication

- Pharmacotherapies related to substance abuse

Required Reading As advised by lecturer


HNM5215 ADVANCED CLINICAL MEDICATION MANAGEMENT (NURSING SPECIALISATIONS) Campus St Albans

Prerequisites Nil

Co-requisites Nil

Learning Outcomes From this subject, students should develop an advanced understanding of the therapeutic use of drug therapy with reference to their specialised area of study.

Content Principles of pharmacotherapy, drug action - pharmacokinetics and pharmacodynamics

- Toxicology and envenomation

- Drug therapy for all body systems, examples: Endocrine, CNS, Gastrointestinal, Cardiovascular, Respiratory systems

- Sedatives and hypnotics

- Drugs for hyperlipidaemia

- Anti-inflammatory agents

- Analgesics and antipyretics

- Antibacterial drugs

- Medications summaries and drug interactions

- Assembling a treatment program

- Medication compliance and quality use of medicines; and

- Specialty based medication

Recommended Reading

Class Contact
36 hours

Assessment
Examination consists of 50 multiple choice questions and short answer questions (2 hours) 50%
Case study assignment on therapeutic intervention (2500 words) 50%

HNMS217 CLINICAL STUDIES 3 (MEDICAL/SURGICAL NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes
On the completion of this practicum, the students should be able to:
• develop and/or enhance clinical skills introduced in theoretical subjects in a practice setting;
• develop competent clinical, professional and ethical practice at an advanced level;
• contribute and work collaboratively within the health care team and to advance knowledge generation;
• observe, and practise under the supervision of, experienced clinicians in interviewing, assessing, and managing the care of clients in an Acute care setting;
• further develop their understanding of evidence-based practice;
• expand their theoretical knowledge of learning and teaching principles, counselling techniques and communication strategies in a clinical setting;
• plan, develop, implement and evaluate client and peer educational programs;
• Work towards further developing personal skills including:
  • the ability to adapt to new and challenging situations;
  • assess and develop further awareness of personal strengths and weaknesses;
  • critique presentation skills;
• acquire self-evaluation abilities.

Content
As there are a variety of role expectations of advanced Medical/Surgical nurse practitioners, it is imperative that each student determines the clinical learning required to achieve expertise in clinical Medical/Surgical nursing. As each student's learning experience at the time of entry to this unity is seen as unique and dynamic, this unit recognises the need for self-determination of learning modalities. Therefore the content includes: the diversity of the clinical environment in specialised orthopaedic nursing practice; role of the advanced orthopaedic nurse practitioner; leader, manager, educator, researcher, and collaborative consultant in the health care team. Further, as per contract developed by the student in collaboration with a lecturer, students are expected to spend their clinical learning experience in a related area but outside their current clinical practice, to further expand their clinical learning experience to achieve expertise and skills as an advanced practitioner in orthopaedic nursing.

Required Reading

HNMS6029 CLINICAL SPECIALISED PROJECT
Campus St Albans
Prerequisite(s) Master of Nursing (Specialisation) at Graduate Diploma level.

Content
The clinical project is intended to be a scholarly independent and creative piece of work in an area of student personal/professional interest in the field of his/her specialisation. It can be in any of the broad spectrums of nursing and nursing practice, for example: specialised clinical nursing practice, professional nursing practice or nursing/patient education. Student identifies an issue or poses a question, undertakes an exhaustive/extensive relevant literature review, reflects on the theoretical underpinnings and plans for an implementation of change to achieve excellence in practice. The project will be undertaken in consultation with the relevant nursing specialisation course co-ordinator or another appropriate designated facilitator.

Required Reading
As defined by the choice of the topic for the clinical project.

Subject Hours
The student will be expected to devote the equivalent of a 6-hour week to the subject. The format is variable to meet students' needs.

Assessment
Two Parts: 1. A written proposal of the clinical project:
Word Limit =1000 Mark 10%
Clinical Project comprising an exhaustive/extensive relevant literature review and an implementation plan: Words Limit: 9000 Mark = 90%.
HN6110 NURSING AND PHILOSOPHY OF SCIENCE

Campus St Albans
Prerequisite(s) Nil
Content This subject provides an overview on ways in which the discipline of nursing has been influenced by various philosophies of science. In addition, it will examine changing trends in scientific methods of inquiry and their influence on nursing’s epistemology.

Required Reading To be advised by lecturer.


Subject Hours Three hours per week for the semester.

Assessment Written assignment (4000 words), 70%; seminar presentation, 30%

HN6118 EVIDENCE BASED PRACTICE IN SPECIALISED NURSING

Campus St Albans
Prerequisite(s) Nil


Subject Hours 39 hours

Assessment Part 1- 35%; Part 2- 65%

HN6119 LEADERSHIP AND MANAGEMENT IN SPECIALISED NURSING

Campus St Albans/Offshore
Prerequisite(s) Nil
Content The content of the subject includes component of specialist settings; change theory and process in acute health care organization; organisation structures and their effects on communication; role of nurse manager in specialised nursing practice; human resource challenge; principles of teamwork; management and leadership principles; budgeting and costing; models of leadership and management in specialised practice.


Transforming Nursing Through Reflective Practice. Oxford: Blackwell Science

Subject Hours The equivalent of three hours per week for one semester organised according to the teaching mode used.

Assessment Presentation (equivalent to 2000 words) – 40% Written Assignment (2500 to 3000 words) 60%.

HN6122 CLINICAL PROJECT

Campus Footscray Park
Prerequisite(s) Nil
Content The clinical project is the culmination of the depth and breadth of the course on Substance Abuse and is intended to allow the student to pursue his or her own area of study in the clinical or other settings. It is intended that the work of the student will be original and carried out under the guidance of a supervisor. The student will be required to choose the focus of their study, such as program evaluation, efficacy of a particular treatment modality, psychosocial or other factors relating to substance abuse. The student will present relevant aims and objectives and arrange the study placement and conduct the study under the guidance of the supervisor.

Required Reading No required reading, as each student will explore a topic of their choosing.

Subject Hours This subject will be taken over two semesters and the hours will be undertaken in consultation with the supervisor.

Assessment A current literature review equivalent to 2500 words (30%) will be included and the project will be of 7500 words in length (70%)

HN6125 SPECIALISATION CLINICAL PROJECT (FULL TIME)

Campus St Albans
Prerequisite(s) Nil
Co-requisite(s) Nil
Learning Outcomes Upon completion of this subject, students should be able to:
1. Critically analyse structure, process and outcome of activities in their professional healthcare practice;
2. Identify an area of personal interest to improve practice by developing a proposal to and implement change;
3. Promote the highest standard of professional healthcare practice and excellence in their specialised field of practice;
4. Demonstrate independence, autonomy, and clinical decision-making skills in a multi-disciplinary environment;
5. Promote individual commitment to, and recognition of life long learning;
6. Competently utilise available evidence for continuous practice improvement.

Content The clinical project is the culmination of the depth and breadth of the course on the core area of study. It is intended to allow the student to pursue his or her own area of study in the clinical or other settings. The work of the student will be original and carried out under the guidance of a supervisor. The clinical project should draw on and /or encompass:
• Advanced practical skills and techniques;
• Problem solving techniques;
• Organization and management strategies;
• Incorporation of appropriate biological and social sciences;
• Relevant research findings;
• Teaching and learning approaches.

The student will be required to choose a topic related to their professional practice. The clinical project may include program evaluation, efficacy of a particular treatment modality, psychosocial or other factors relating to certain conditions.


324


Class Contact This subject will be conducted over one or two semester depending on mode and contact hours will be negotiated in consultation with the supervisor using a learning contract.

Assessment The assessment for this subject consists of two parts:

1. A written proposal which includes a comprehensive background and justification of the clinical project: Word limit = 1000 words Mark 10%

2. A clinical project comprising an extensive relevant literature review, a proposed change for practice and a plan for implementation of change. Students are encouraged to use various media in creative ways, in the implementation of this project. Word Limit: 9000 words or negotiated equivalent Mark 90%

HNM6135 SPECIALISATION CLINICAL PROJECT (PART TIME)

Campus St Albans

Prerequisites Nil

Co-requisites Nil

Learning Outcomes Upon completion of this subject, students should be able to:

1. Critically analyse structure, process and outcome of activities in their professional healthcare practice;

2. Identify an area of personal interest to improve practice by developing a proposal to and implement change;

3. Promote the highest standard of professional healthcare practice and excellence in their specialised field of practice;

4. Demonstrate independence, autonomy, and clinical decision-making skills in a multi-disciplinary environment;

5. Promote individual commitment to, and recognition of life long learning;

6. Competently utilise available evidence for continuous practice improvement.

Content The clinical project is the culmination of the depth and breadth of the course on the core area of study. It is intended to allow the student to pursue his or her own area of study in the clinical or other settings. The work of the student will be original and carried out under the guidance of a supervisor.

The clinical project should draw on and/or encompass:

- Advanced practical skills and techniques;
- Problem solving techniques;
- Organization and management strategies;
- Incorporation of appropriate biological and social sciences;
- Relevant research findings;
- Teaching and learning approaches.

The student will be required to choose a topic related to their professional practice. The clinical project may include program evaluation, efficacy of a particular treatment modality, psychosocial or other factors relating to certain conditions.


Class Contact This subject will be conducted over one or two semester depending on mode and contact hours will be negotiated in consultation with the supervisor using a learning contract.

Assessment The assessment for this subject consists of two parts:

1. A written proposal which includes a comprehensive background and justification of the clinical project: Word limit = 1000 words Mark 10%

2. A clinical project comprising an extensive relevant literature review, a proposed change for practice and a plan for implementation of change. Students are encouraged to use various media in creative ways, in the implementation of this project. Word Limit: 9000 words or negotiated equivalent Mark 90%

HNM6200 HEALTH PROMOTION

Campus St Albans

Prerequisites Nil

Co-requisites Nil

Learning Outcomes On the completion of this subject the student should be able to:

- Determine learning and health promotion needs of both individuals and aggregates of people;
- Appraise policy for its health enhancing potential;
- Utilise health promotion strategies that are cognisant of, and sensitive to, the cultural and social identities of individuals and groups;
- Discriminate between practices that are emancipatory and those that are not;
- Critically analyse programs and projects in relation to their potential to yield sustainable health outcomes;
- Evaluate, at a theoretical level, approaches undertaken to enhance the health and wellbeing of individuals or groups of people.

Content Contemporary concepts, values and debates in health promotion

- Health literacy – at individual and aggregate levels
- Education for health – self efficacy, peer education, motivational interventions
- Selection of appropriate interventions for facilitating learning at an individual level
- The policy context and its appraisal
- Population/ community assessment strategies
- Using the media
- Community/organisational development strategies
- Sustainability
- Working with individuals from culturally and linguistically different backgrounds
- Emancipatory approaches to health promotion
- Collaboration, partnerships and team work
- Evaluation of practice


Class Contact 36 hours
HNM6331 CLINICAL PROJECT

Campus St Albans

Prerequisites Nil

Co-requisites

Learning Outcomes Upon completion of this subject, students should be able to:

1. Critically analyse structure, process and outcome of activities in their professional healthcare practice;
2. Identify an area of personal interest to improve practice by developing a proposal to and implement change;
3. Promote the highest standard of professional healthcare practice and excellence in their specialised field of practice;
4. Demonstrate independence, autonomy, and clinical decision-making skills in a multi-disciplinary environment;
5. Promote individual commitment to, and recognition of life long learning;
6. Competently utilise available evidence for continuous practice improvement.

Content

The clinical project is the culmination of the depth and breadth of the course on the core area of study. It is intended to allow the student to pursue his or her own area of study in the clinical or other settings. The work of the student will be original and carried out under the guidance of a supervisor.

The clinical project should draw on and/or encompass:

1. Advanced practical skills and techniques;
2. Problem solving techniques;
3. Organization and management strategies;
4. Incorporation of appropriate biological and social sciences;
5. Relevant research findings;
6. Teaching and learning approaches.

The student will be required to choose a topic related to their professional practice. The clinical project may include program evaluation, efficacy of a particular treatment modality, psychosocial or other factors relating to certain conditions.


HNM6800 RESEARCH THESIS (FULL-TIME)

Campus St Albans

Prerequisite(s) Eligibility for entry to a Masters by Research or Doctor of Philosophy program.

Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the investigation described in detail; results and conclusions from the study elaborated; and an extended discussion presented. Students may be required to undertake some lecture courses, as specified at the time of commencement.

Required Reading To be advised by supervisor.

Subject Hours Independent research in addition to regular meetings with the students supervisors.

Assessment

The thesis will normally be assessed by at least two expert examiners from an appropriate area of expertise.

HNM6801 RESEARCH THESIS (PART-TIME)

Campus St Albans

Prerequisite(s) Eligibility for entry to a Masters by Research or Doctor of Philosophy program.

Content This subject, the aim of which is to enable students to competently research an area of study utilising knowledge and skills gained in previous studies, consists of a project carried out by students on an individual basis. The project is expected to be an investigation of an approved topic, followed by the submission of a suitably formatted thesis in which the topic is introduced and formulated; the investigation described in detail; results and conclusions from the study elaborated; and an extended discussion presented. Students may be required to undertake some lecture courses, as specified at the time of commencement.

Required Reading To be advised by supervisor.

Subject Hours Independent research in addition to regular meetings with the students supervisors.

Assessment

The thesis will normally be assessed by at least two expert examiners from an appropriate area of expertise.

HNM7006 MIDWIVES WORKING WITH DIVERSITY

For continuing students only

Campus Distance Education

Prerequisite(s) Nil

Content

Module One: Framing the subject: Knowing self; Feminist and Humanistic principles in working with diversity; Defining sexuality and its relationship to childbirth. Module Two: Cultural diversity: Cultural safety/sensitivity; Aboriginality; Women from diverse cultural and ethnic backgrounds; Spiritual differences & cultural practices. Module Three: Social diversity: Social justice, equity and access; Poverty and maternity; homelessness; physical and sexual abuse; chemical dependency.


HNM7007 CHILDBEARING OBSTACLES
For continuing students only
Campus Distance Education.
Prerequisite(s) Nil
Content Module One: Pregnancy Obstacles: Collaborative role of midwife: Anaemia; Blood disorders; Infections; Miscarriage; Intraterine growth restriction; Fetal death in uterus; Antepartum haemorrhage; Variations in blood pressure; Diabetes; Chemical dependency; Surgical conditions. Module Two: Midwifery and Obstetric Care: Positions, lie and presentations of the fetus; Preterm labour; Induction and augmentation of labour; Inco-ordinated uterine action; 'Intervention cascade'; Medical technology: ultrasound; cardiotocography; epidural analgesia; forceps & ventouse; caesarean section. Module Three: Unexpected Obstacles During Labour & Birth: Cord presentation and prolapse; Fetal distress; Primary postpartum haemorrhage; Shoulder dystocia; Maternal shock and collapse. Module Four: Maternal Obstacles in First Weeks After Birth: Breast feeding challenges; Pyrexia; Secondary postpartum haemorrhage; Haematomas; Post-caesarean section: extra care; Mood variation; psychological distress: Implications for woman and midwifery practice.
Required Reading To be advised by subject lecturer.
Subject Hours Thirty-six hours for one semester, conducted via flexible delivery.
Assessment A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.
HNM7010 HANGING UP A SHINGLE (MONASH)
For continuing students only
Campus St Albans
Prerequisites Nil
Co-requisites Nil.
Learning Outcomes This subject will enable you to:
• Demonstrate an ability to act in partnership with the woman in the woman's own environment;
• Explore the collaborative relationships with other professionals that midwives, in private practice, engage in to ensure safe outcomes for women in their care;
• Discuss the difficulties common to midwives when 'running' a small business;
• Demonstrate an understanding of the implications of isolation for midwifery practice;
• Explore strategies to facilitate the establishment of professional support and network for midwives considering private practice;
• Demonstrate an understanding of the politico-legal constraints an independent midwife in practice will experience;
• Develop practice guidelines and strategies to evaluate practice;
• Demonstrate an understanding of the need for reflective practice for the implementation of evidence informed care in private practice;
• Demonstrate midwifery competency based upon the ACMI Competency Standards for Midwives.
• Core graduate attributes to be achieved by students are:
  • Locate, evaluate, manage and use a range of relevant information from a critical perspective. This subject encourages students to be critical and evaluate what they read and apply knowledge to their practice roles.
  • The subject teaches students how to synthesise and comment and write on a wide range of issues for midwives in private practice.
  • Students will follow complex instructions and manage time with minimal guidance.
  • The subject heavily reflects the role and operation of the independent midwife in private practice in Australia today. The student will apply and evaluate strategies relating to issues of social and cultural diversity related to professional practice, seeking information where necessary.
Content The subject will consist of the following 2 modules:
Module 1: Professional Issues Intensive learning (on-line learning) at Victoria University:
• Participation in the profession, professional development;
• Advanced skill development (prescribing, referral and ordering tests);
• Care of self and others in the workplace;
• Developing an evidence-informed practice.
Midwives in private practice (on-line / Victoria University):
  • Visiting rights (accessing hospital services);
  • Sharing knowledge and skill;
  • Professional indemnity insurance;
  • Quality improvement;
  • Access and maintenance of equipment;
  • Record keeping;
  • Reporting result guidelines for practice;
  • Midwives working together in private practice.
Module 2: Establishing a business: (on-line) Learning package from a business educator includes:
• Getting started;
• Managing a business as a solo practitioner;
• Charging a fee for service;
• Financial records;
• Taxation;
• Marketing your services.
Class Contact This is a 56 hour theory subject undertaken on-line. It consists of two learning modules (46 hours) and a component of self-directed learning (10 hours).
Assessment There are 2 pieces of assessment for this subject: Essay (2000 words) and Commentary (1000 words).
HNM7012 BEGINNING THE JOURNEY
Campus St Albans
Co-requisite(s) HNM 7000 With Childbearing Woman
Content Skill development and application of principles in basic midwifery care: Establishing a safe and therapeutic environment; Principles and practice of infection control techniques; Mobility and ‘no lift policy’; Safe practices in medication: principles and practices of administration of oral and other medications; assessment, history taking, data collection and recording; Legal and ethical considerations in midwifery practices; Health assessment and physical examination skills; Monitoring: documenting baseline observations such as temperature, pulse, respiration, blood pressure, foetal heart sounds, urinalysis and care of equipment; Engaging in health promotion activities.
HN7114 CONTINUITY OF CARE 1
Campus St Albans
Prerequisite(s) Nil
Content Students will be introduced to the Continuity of Care program in which they make contact with pregnant women in clinical venues or in the community. Students will be assisted to develop a professional midwifery practice relationship with emphasis on basic interviewing and history taking; reflective practice; journal writing; application of principles of communication; assessment of the woman and her baby; working with a woman giving birth; working with the woman to feed her baby; working with the woman to care for herself and her baby before and after birth; and documentation of midwifery actions and women's attitudes and responses. Students will explore the position of contemporary midwifery practice with emphasis on: historical context; evolution of the profession of midwifery; midwifery identity; the uneasy tensions between midwifery and nursing and midwifery and medicine; role of the midwife; and models of care.


HN7115 MIDWIFERY STUDIES 1: THE CHILDBEARING JOURNEY
Campus St Albans
Prerequisite(s) Nil
Content This subject will include: pre-conception, sexuality, fertility/infertility, pre-conception health, environmental issues. The foetus and the woman during pregnancy: embryology, foetal growth & development, physiological and psychosocial alteration & adaptation during pregnancy, maintaining health principles of optimal nutrition for the woman and her baby, pregnancy assessment. Labour and birth: physiological and psychosocial alteration and adaptation during labour and birth, facilitating a normal process of birth, supporting a woman during labour, continuity of care, assessment, reception of the newborn. Skill development and application of principles in basic midwifery care: Assessment, history taking, interview, data collection and recording (using women-held records); Introduction to clinical paths: health assessment and physical examination skills – pregnancy assessment including abdominal examination – labour assessment including vaginal examination. Introduction to primary health counselling: guidelines for offering primary health counselling; facilitating informed decision making; accessing relevant information; engaging in health promotion activities; communication; counseling; partnership with woman. Assessment in labour: assessment of the woman, culture & family, pain assessment, foetal assessment, skill development and application of principles in basic midwifery care.
progress of the birth process. Midwifery care in partnership during birthing: comfort; orientation to environment; partnership, dignity and respect; support and position; mobilization.

**Required Reading**

**Recommended Reading**

**Subject Hours**
70 hours – 60 hours theory, – 10 hours self directed.

**Assessment**
3-hour examination – 60%, Essay (1500 words) – 40%.

---

**HNM7201 MIDWIFERY STUDIES 2: THE CHILDBEARING JOURNEY**

**Campus St Albans**

**Prerequisite(s)**
Midwifery Studies 1: The Childbearing Journey

**Content**

**Required Reading**

**Subject Hours**
Block clinical placement of 208 hours.

**Assessment**

---

**HNM7203 MIDWIFERY STUDIES 3: CHILDBEARING COMPLICATIONS**

**Campus St Albans**

**Prerequisite(s)**
Midwifery Studies 1 & 2: The Childbearing Journey, Midwifery Practice 2: The Childbearing Journey

**Content**
IV antibiotics, Blood sugar monitoring, Mental Health issues, Psychopathology of pregnancy and childbirth, Motherhood and mental illness, Assessment and management, Midwifery role

Required Reading


Recommended Reading


Subject Hours

70 hours – 60 hours theory, 10 hours self-directed study.

Assessment

Three hour examination: 60%, Essay (1500 words), 40%.

HNM7204 MIDWIFERY PRACTICE 3: CHILDBEARING COMPLICATIONS

Campus St Albans

Prerequisite(s) Midwifery Studies 1 & 2: The Childbearing Journey, Midwifery Practice 2: The Childbearing Journey

Co-requisite(s) Midwifery Studies 3: Childbearing Complications

Content

In partnership with the woman and under supervision:

Assessment


Recommended Reading


Subject Hours

Block clinical placement of 208 hours

Assessment

Practice assessment based on ACMI Competency Standards: Satisfactory/Unsatisfactory

3 Reflective Journals: Satisfactory/Unsatisfactory

HNM7205 MIDWIVES WRKG WITH WOMEN FROM DIV BCKGRD

Campus St Albans

Prerequisite(s) HBHW – Bachelor of Midwifery (Pre-Registration)

Learning Outcomes

Students will be expected to:

• Develop an understanding of their own values and beliefs, and the challenge presented when working with woman who are different from their selves;
• Discuss the impact that social inequities have on being with woman during her childbearing experiences;
• Demonstrate an understanding of social justice issues impacting on woman health in Australia;
• Demonstrate practice that reflects cultural safety and sensitivity with woman;
• Discuss specific issues impacting on the health of being with Aboriginal woman and her baby;
• Discuss the politics of with woman health with reference to contemporary issues;
• Apply evidence-based knowledge to midwifery practice; and,
• Examine with woman experiences as a recipient of health and maternity care, paying particular attention to socio-economic and cultural difference.

Content

Framing the Subject

Knowing self;
• Feminist and Humanistic principles in working with diversity;
• Sociopolitical factors impacting on woman health and childbearing in Australia;
• With woman experiences of health care;
• The relationship between gender and health; and
• Individualised midwifery care practices.

Cultural Diversity

Cultural safety/sensitivity;
• Aboriginality;
• With woman from diverse cultural and ethnic backgrounds;
• Spiritual differences & cultural practices; and
• Genital mutilation.

Social Diversity

Social justice, equity and access – social class;
• Poverty and maternity;
• Homelessness;
• Physical and sexual abuse, rape, sexual assault;
• Partner abuse; and
• Chemical dependency.

Recommended Reading


Recommended Reading


Cultural Diversity

Framing the Subject

Knowing self;
• Feminist and Humanistic principles in working with diversity;
• Sociopolitical factors impacting on woman health and childbearing in Australia;
• With woman experiences of health care;
• The relationship between gender and health; and
• Individualised midwifery care practices.

Social Diversity

Social justice, equity and access – social class;
• Poverty and maternity;
• Homelessness;
• Physical and sexual abuse, rape, sexual assault;
• Partner abuse; and
• Chemical dependency.

Recommended Reading


Recommended Reading


Social Diversity

Social justice, equity and access – social class;
• Poverty and maternity;
• Homelessness;
• Physical and sexual abuse, rape, sexual assault;
• Partner abuse; and
• Chemical dependency.

Recommended Reading


Recommended Reading


Social Diversity

Social justice, equity and access – social class;
• Poverty and maternity;
• Homelessness;
• Physical and sexual abuse, rape, sexual assault;
• Partner abuse; and
• Chemical dependency.

Class Contact 56 hours: – 48 hours theory – 8 hours self-directed study

Assessment On-line participation in discussion groups: 10% Essay [2000 words]%60% Oral presentation:30%

HNM7208 CONTINUITY OF CARE TWO

Campus St Albans

Prerequisites Nil.

Learning Outcomes Students will be expected to:

Examine the politics of maternity services;

Apply evidence-based knowl edge to midwifery practice;

Discuss the professional standards and requirements informing midwifery practice.

Content Students will continue the ‘Continuity of Care’ program. The aims and requirements of the program will be further highlighted. The central concepts of woman-centredness and continuity of care in midwifery practice will be realised by the students following through the study of maternity care in childbearing and childbirth. This subject will examine the evidence-based knowledge to midwifery practice and the role of the midwife and the implementation of evidence informed care in private practice.

Required Reading


Class Contact 136 hours: – 16 hours theory – 120 follow through journey clinical hours

Assessment Partnership log focusing on partnership and follow through of being with woman (10 women) including fieldwork and reflective journals: Satisfactory/ Unsatisfactory Content Skill development in with woman health assessment will be built in a simulated learning environment. The role of the midwife in primary health care will be discussed promoting health and wellness throughout the reproductive lifespan. Content will be explored within three modules representing common health problems experienced with woman: With woman Health Across The Lifespan – First Impressions

• Puberty
• Controlling fertility/contraception
• Sexually transmitted diseases and infections (non HIV)
• Menstrual disorders
• Eating disorders and body image

With woman Health Across The Lifespan – Physical Problems

• Pelvic pain, Endometriosis
• Infertility
• IVF
• HIV & AIDS
• Breast health and disease
• Being with woman with cancer
• Continence, the pelvic floor, vaginal repair
• Hysterectomy
• Menopause
• Chronic illness

With woman in the workplace, working in the home

Women’s Health Across The Lifespan – Mental Health & Addictive Disorders

Required Reading


Class Contact 60 hours theory
Assessment 3 hour examination: 60% Written assignment [1500 words]: 40%

HNM7227 MIDWIFERY PRACTICE 4
Campus St Albans
Prerequisites HNM 7113 Foundations in Midwifery Practice, HNM 7201 Midwifery Practice 2: The Childbearing Journey, HNM 7204 Midwifery Practice 3: Childbearing Complications
Co-requisites Midwifery Studies 4: Women’s Health

Learning Outcomes Students will be expected to:
- Describe the role of the midwife working in partnership as the provider of primary and collaborative care with woman throughout the reproductive health lifespan;
- Demonstrate skill in undertaking a with woman health assessment in an acute healthcare settings;
- Demonstrate midwifery practice skill in promoting wellness, healthy lifestyle messages and routine screening programs with woman in their care;
- Apply knowledge of with woman physical and psychological health in with woman experiencing reproductive and breast health concerns;
- Demonstrate understanding of specific reproductive health concerns with woman including cancer and urinary conditions;
- Develop a plan of woman-centred care with woman experiencing diagnostic and/or therapeutic procedures in an acute care setting;
- Demonstrate midwifery practice skill in the delivery of woman-centred care with woman experiencing diagnostic and/or therapeutic procedures in an acute care setting;
- Apply knowledge of discharge planning in partnership with woman experiencing short in-patient and day procedures related to reproductive and breast health concerns;
- Apply knowledge of specific reproductive and breast health concerns in evaluating woman-centred care outcomes;
- Employ reflective practice and implement evidence-informed care;
- Apply evidence-based knowledge to midwifery practice;
- Explore community resources available to support with woman with specific reproductive or breast health concerns;
- Demonstrate the ability to practice within a multidisciplinary team; and
- Document the ongoing relationship with woman they are following through in a way that reflects their own involvement and actions and the rationale for these, as well as with woman actions and attitudes and responses to midwifery actions.

Content Within a framework of working with woman in partnership, the role of the midwife providing primary and collaborative care with woman throughout the reproductive lifespan will be explored under the following subheadings:
- Undertaking a comprehensive with woman health assessment;
- Guidelines for practice and skill development;
- Primary care midwife promoting with woman wellness;
- Strategies for promoting breast awareness and mammography screening (mammochec program): regular cervical screening: healthy diet, regular weight-bearing exercise, pelvic floor exercises;
- Midwife providing woman-centered collaborative care in the acute care setting;
- Physical and psychological pre and post operative considerations;
- Caring with woman experiencing diagnostic & therapeutic procedures for reproductive and urinary conditions reflecting the specific care requirements;
- Caring with woman experiencing diagnostic & therapeutic procedures for breast related conditions reflecting the specific care requirements;
- Caring with woman experiencing treatment for cancers of the reproductive or breast related conditions; and
- Consequences of chemotherapy to be taken into consideration when planning care with woman.


Class Contact Block clinical placement of 120 hours
Assessment Clinical Assessment Tool & clinical learning objectives: Satisfactory/ Unsatisfactory 3 Reflective Journals: Satisfactory/ Unsatisfactory

HNM7310 MIDWIFERY STUDIES 5 CHILDBEARING COMPLIC
Campus St Albans
Prerequisites HNM 7114 Midwifery Studies 1: The Childbearing Journey, HNM 7203 Midwifery Studies 3: Childbearing Complications, HNM 7202 Midwifery Practice 2: The Childbearing Journey, HNM 7204 Midwifery Practice 3: Childbearing Complications

Learning Outcomes Students will be expected to: • Utilise knowledge from anatomy and physiology applicable to being with woman experiencing a complex labour and birth and/or postpartum period;
- Examine specific medical and obstetric conditions that affect labour and birth and the postpartum period;
- Examine perinatal mental health issues and the implications for mothers, families and caregivers;
- Evaluate the implications of obstetric interventions for being with woman and midwifery practice;
- Critically examine the use of technology in midwifery and obstetric practice;
- Perform midwifery practice skills in a simulated laboratory and clinical environment;
- Demonstrate skills in the management of maternity care emergencies;
- Apply evidence-based knowledge to midwifery practice;
- Interpret the role of the midwife a member of a collaborative health-care team; and
- Explore community resources available to provide support with woman in the community.

Content Unexpected Problems During Labour & Birth
- Preterm labour
- In-ordinate uterine action
- Intervention cascade
- Cord presentation and prolapse
- Foetal distress
- Primary postpartum haemorrhage
- Shoulder dystocia
- Maternal shock and collapse
- Collaborative and referral role of the midwife Maternal health problems in first weeks after birth
- Breastfeeding problems
- Pyrexia
- Secondary postpartum haemorrhage
- Haematomas
- Post-caesarean section: extra care
- Medical technology and procedures
- Ultrasound
- Cardiotocography
- Epidural analgesia
- Forceps & ventouse
- Caesarean birth and care
- Assist in obstetrical intervention

Central venous pressure (CVP) monitoring Magnesium sulphate infusion Intravenous infusion pumps Dynamap and blood pressure monitoring Advanced CTG skills Perineal suturing Being with woman and resuscitation when sick


Class Contact 70 hours: -- 60 hours theory -- 10 hours self-directed study

Assessment 3 hour examination: 60% Essay [1500 words]: 40%

HNM7311 MIDWIFE PRAC 5 CHILDbearing COMPLICATION

Campus St Albans

Prerequisites HNM 7115 Midwifery Studies 1: The Childbearing Journey, HNM 7201 Midwifery Studies 2: Childbearing Complications, HNM 7202 Midwifery Practice 2: The Childbearing Journey, HNM 7204 Midwifery Practice 3: Childbearing Complications

Learning Outcomes Students will be expected to:

- Develop a sense of becoming a midwife with emerging confidence and competence;
- Engender a passion for being a midwife and sharing the vision of the midwifery profession;
- Develop a consciousness of their attitudes, beliefs and values with woman and childbearing within a diverse cultural context;
- Construct an awareness of the journey of being with woman through childbearing;
- Employ strategies to work with woman in making the transition to parenthood which is viewed as an experience of growth and change;
- Integrate the knowledge and midwifery practice skills acquired from preceding subjects which inform the current stage of practice as a midwife;
- Apply evidence-based knowledge to midwifery practice;
- Critically reflect on self and practice as a midwife; and
- Implement evidence-informed care when working with woman.

Content Utilising experience from the first and second maternity placement midwifery students will be expected to extend their practice repertoire in providing midwifery care with woman and families under the supervision of a clinical teacher/preceptor. In partnership with woman and under supervision:

- Assessment of with woman and her baby;
- Working with woman giving birth;
- Working with woman to give nourishment to her baby;
- Working with woman to care for herself and her baby before and after birth; and
- Documentation of midwifery actions and with woman attitudes and responses.

Emphasis on:

- Reflection on self and the experiences that influence the development of the concept of self; and
- Application of skills and techniques for the development of effective interpersonal relationships in midwifery.


Or


Class Contact Block clinical placement of 208 hours

Assessment Practice assessment based on ANMC competency standards: Satisfactory/ Unsatisfactory 3 Reflective journals: Satisfactory/ Unsatisfactory

HNM7312 CONTINUITY OF CARE THREE

Campus St Albans

Prerequisites Nil

Learning Outcomes Students will be expected to:

- Demonstrate qualities of woman-centred midwifery practice using theoretical understandings gained in the subject the Childbearing Journey;
- Describe working with woman in childbearing using the theoretical understandings gained in the midwifery and anatomy and physiology subjects;
- Demonstrate midwifery practice skills necessary to provide woman-centred midwifery practice;
- Recognise the importance of with woman and her social context in the provision of maternity services;
- Demonstrate midwifery practice skills in health assessment of with woman and her baby at various stages of pregnancy;
- Demonstrate the ability to undertake higher level health documentation;
- Accurately assess, collect and record data for health profiles/histories of being with woman during childbearing;
- Make contact with a minimum of ten women (in the clinical venue) expecting to give birth later in the year for the purpose of following through their birthing experience from early pregnancy to the first weeks after birth;
- Apply evidence-based knowledge to midwifery practice;
- Explore the link between theory, policy and practice issues in midwifery; and
- Discuss access and equity issues pertaining to special population.

Content Students will continue the Continuity of care program in which they form partnerships with woman during pregnancy in clinical venues. Students will be assisted to develop a professional midwifery practice relationship with emphasis on:

- Interviewing and history taking;
- Reflection in and on action;
- Journal writing;
- Application of principles of communication;
- Assessment of with woman and her baby;
- Working with woman to give birth;
- Working with woman to feed her baby;
- Working with woman to care for herself and her baby before and after birth; and
- Documentation of midwifery actions and with woman attitudes and responses.

Students will explore the position of contemporary midwifery practice with emphasis on:

- State and Federal constraints;
- Issues of professional boundaries; and
- Choice, continuity and control.


Class Contact 126 hours: – 16 hours theory – 110 follow through journey clinical hours

Assessment Partnership log focusing on partnership with and follow through being with woman (10 women total in course n = 30) including fieldwork and reflective journals: Satisfactory/ Unsatisfactory

HNM7314 MIDWIFERY PRAC 6-BABIES NEED EXTRA CARE

Campus St Albans

Prerequisites HNM7114 Midwifery Studies 1: The Childbearing Journey, HNM 7203 & HNM 7310 Midwifery Studies 3 & 5: Childbearing Complications, HNM 7202 Midwifery Practice 2: The Childbearing Journey, HNM 7204 & HNM 7311 Midwifery Practice 3 & 5: Childbearing Complications

Learning Outcomes Students will be expected to:

- Demonstrate understanding of the circumstances that necessitate admission of a baby to a Level two nursery;
- Evaluate the level two nursery environment and its impact upon the baby and family;
- Understand the role of the midwife within the context of the level two nursery multidisciplinary team;
- Utilise the clinical decision making process to demonstrate knowledge and understanding of the care required by the baby and the family;
- Apply evidence-based knowledge to midwifery practice;
- Demonstrate an appreciation of the family’s need for privacy, dignity and respect, as well as their right to be informed and to make decision regarding care of their baby;
- Demonstrate an understanding of reflective practice in the implementation evidence informed care for the baby and family; and
- Debate the ethical-legal issues, which arise in the care of babies with special needs;

Content Environment
- Growth & Development
- Level Two Nursery
- Equipment
- Personnel
- Influence upon the wellbeing of the baby
- Impact upon the family
- Role of the midwife in the team

Circumstances That May Require Babies To Be Admitted To A Level Two Nursery
- Pre-Term
- Post-Term
- Congenital Anomalies
- Metabolic Disturbances
- Small For Gestational Age
- Chemical Dependency

- Birth Asphyxia
- Jaundice
- Anaemia
- Birth trauma
- Care of the Baby

- Gestational Assessment
- Facilitation Of Growth & Development
- Oxygenation
- Elimination
- Nutrition
- Immunity
- Temperature
- Care Of The Family

- Support & counselling
- Involvement in care and decision making
- Education
- Transition to parenthood
- Ethico-legal Issues
- Informed consent
- Rights of the baby
- Economic challenges
- Maintenance of life support

Neonatal Emergency Transport Service
- History of the service
- Role of the service
- Referral, stabilization and retrieval


Recommended Reading

Class Contact 60 hours theory

Assessment Topic test: 20%, 2 hour examination: 50%, Essay [1000 words]: 30%

Class Contact: Block clinical placement of 120 hours


HNM7315 MIDWIFERY PRACTICE 7 CONSOLIDATION

Campus: St Albans

Prerequisites: HNM7114 Midwifery Studies 1: The Childbearing Journey, HNM 7203 & HNM 7310 Midwifery Studies 3 & 5: Childbearing Complications, HNM 7202 Midwifery Practice 2: The Childbearing Journey, HNM 7204 & HNM 7311 Midwifery Practice 3 & 5: Childbearing Complications

Learning Outcomes: Students will be expected to:

- Demonstrate the application of knowledge acquired through related theoretical and skills based subjects;
- Adapt knowledge of health assessment procedures to the individualised care requirements of with woman who is childbearing and newborns;
- Demonstrate safe clinical practice in accordance with ANMC competency standards, and consistent with level, knowledge and performance of a graduate midwife at beginning level;
- Implement individualised midwifery care for childbearing with woman acknowledging physical/mental condition, communication needs and socio-cultural background;
- Demonstrate appropriate interpersonal skills with woman during childbearing and her family, and healthcare personnel;
- Apply legal and ethical principles to the midwifery care requirements of childbearing with woman;
- Participate in reflective practice process through documentation, discussion, self-evaluation of both on-campus and clinical learning experiences and the relationship between them;
- Apply evidence-based knowledge to midwifery practice;
- Critically apply relevant theoretical concepts from related areas of study in the analysis of midwifery situations; and
- Incorporate current research findings into midwifery practice.

Content: Utilising experience from the previous maternity placement midwifery students will be expected to develop an increasingly independent role in providing midwifery care with woman and her family under the supervision of a clinical teacher/preceptor.

In partnership with woman and under supervision:
- Assessment of with woman and her baby;
- Working with woman giving birth;
- Working with woman to give nourishment to her baby;
- Working with woman to care for herself and her baby before and after birth; and
- Documentation of midwifery actions and with woman attitudes and responses.

Credit Transfer Arrangements: (including Articulation Pathways) if applicable: Nil


Or


HNN0001 THE AUSTRALIAN HEALTH CARE SYSTEM

Campus: St Albans

Prerequisites: Nil

Learning Outcomes: Content: This subject examines the multi-layered structure of the Australian health care system, and the effects of this on health policy. Attention is given to the implications of recent changes in funding, and in particular the impact on nursing services. Health care policies, Workcover legislation and social welfare practices are reviewed.


Class Contact: 16 hours over 12 week duration Assessment: One two hour examination 100% held in week 12 composed of short answer questions.

HNN0002 NURSING WITHIN THE AUST HEALTH CARE SYS

Campus: St Albans

Prerequisites: Nil

Content: This subject addresses the legal, ethical, professional and cultural dimensions of nursing practice. The interrelationship between how nursing is practiced, competing ethical theories and principles, resulting actions and their implications are examined.

Legal issues include:
- the Australian legal system, legal responsibilities and current legislation, personal and professional liability, regulation of the profession, worker's compensation and freedom of information.
- Ethics, professional decision making and cultural issues in nursing practice topics include:
  - the meaning of ethics and relevance to nurses' practice, identification of ethical problems and dilemmas in health care and
nursing practice and the process of making ethical (or moral) decisions.

- Participants are encouraged to explore the role of culture in nursing at both a personal and organisational level including utilisation of one’s own experience to explore cultural issues. Professional issues include:
  - concepts of professionalism, current trends in professional development with introductory discussions of the ‘nurse practitioner’, problem solving frames and evidence based practice.
  - review of professional bodies relevant to nursing practice within Australia

**Required Reading**


**Recommended Reading**


**Class Contact**

16 hours over 12 weeks comprising of lectures/tutorials and seminar presentations.

**Assessment**

Part (1) A group presentation of an in depth case study to be at least 45 minutes duration (75%). To be presented by each group over the course. Part (2) A written overview of approximately 500 words summarising the major issues evident in the case study (25%). To be submitted a week after presentation. Additional Information of the assessment including presentation criteria will be distributed on the commencing week.

**HNNO003 PHARMACOLOGY**

**Campus**

St Albans

**Content**

This subject provides an overview of pharmacology, and revision of drug calculations. Drug principles and policies as they relate to nursing practice within Australia are discussed. Poisons and Controlled Substances Act. Issues of drug dispensing in the hospital environment and specific drug administration protocols are reviewed. This unit is taught concurrently with unit 4.

**Required Reading**


**Class Contact**

12 hours over 12 weeks comprising of lectures and tutorial activities.

**Assessment**

A pharmacology progression test consisting of drug & IV calculations& drug knowledge and short answer questions to identify further learning needs and a final pharmacology test in week 12 consisting of drug knowledge, short answer questions, drug and IV calculations (100%).

**HNNO004 NURSING PRINCIPLES PROCESS AND PRACTICE**

**Campus**

St Albans

**Prerequisites**

Nil

**Content**

This unit builds on participants’ knowledge and understanding of critical events across the lifespan and their effects on individuals and families. These will include aging and psychophysiological disorders. Case studies and scenarios are used to allow for a holistic approach to client care and the use of clinical decision making skills.

**Required Reading**


**Recommended Reading**


**Class Contact**

A total of 80 hours (66 hrs of theory and 14 hrs of laboratory sessions) consisting of a range of teaching methods including lectures, seminars, tutorials and laboratory contact. A total of 14 hours allocated to laboratory sessions.

**Assessment**

A 2000 word assignment based on a case study of a client nurses by the participant during the course. Appropriateness of the case study should be negotiated with the lecturer prior to commencement of assignment (100%). Participants must pass this assessment and their clinical (ANMC or previously known as ANCI) assessment in order to gain a satisfactory grade for clinical practice.

**HNNO005 COMMUNICATION PROCESSES**

**Campus**

St Albans

**Prerequisite(s):** Nil

**Learning Outcomes:** On completion of the Unit, students should be able to:

- Integrate knowledge and to develop further understanding of communication patterns and behaviour at both individual and group levels.
- Build on knowledge to enable further understanding and sensitivity to griefing, dying and loss in relation to self and others.
- Communicate effectively with colleagues, clients and families.
- Develop knowledge and skills related to nursing informatics and specific documentation forms.

**Content:** This unit incorporates discussion of a range of topics broadly related to social processes and behaviour. Communication skills are studied in an experiential learning context: attending, listening and responding; non-verbal communication; reflected feelings; interviewing skills; conflict and negotiation; group dynamics. Grief is explored in the context of loss and dying.

**Required Reading:**


HNN0006 CLINICAL PRACTICE

Campus St Albans

Prerequisites Nil

Content Students will commence clinical practice in week three of the course. This is in order to ensure that students have had an opportunity to integrate theory into practice. The clinical placement will take place in an acute clinical setting with a total of 28 days (8 hours per shift) and 4 days aged care (6 hours per shift) in duration.

Class Contact 256 hours composed of aged care (32 hours) and acute care (224 hours).

Assessment Students will be required to complete a nursing care plan each week for one client whom they have cared for during that week. The document will need to show the following:

- assessment of the person
- pathophysiology of the persons existing health problems
- nursing problem statements/diagnosis
- interventions
- outcomes
- prescribed medications and their action, dose and frequency and side effects

Additional Assessment
- The student must also pass the Unit HNN004 case study assignment to gain a pass in this Unit
- A care plan is not required for Aged Care facility. Instead students will complete a reflective journal by Wednesday of that week and submit this to the clinical teacher.

HNO5001 ORTHOPAEDIC NURSING STUDIES 1

Campus St Albans, Off Campus

Prerequisite(s) Nil

Content The content includes: Principles and practice of orthopaedics and orthopaedic nursing; advanced health assessment; musculoskeletal assessment; traction application and management; POP and synthetic casting application and management; pathophysiology and clinical assessment of musculoskeletal disorders which include traumatic disorders and non-traumatic disorders such as: fractures, inflammatory diseases, degenerative diseases, and complications of orthopaedic investigations; principles and practice of immobilisation; principles of management and care of individuals with post traumatic orthopaedic disorders; principles of management and care of individuals with non-traumatic orthopaedic disorders; concept, principles and aims of rehabilitation, and the role of the nurse in rehabilitation


Recommended Reading

HNO5002 ORTHOPAEDIC NURSING STUDIES 2

Campus St Albans, Off Campus

Prerequisite(s) Nil

Content The content includes: ambulatory techniques and devices and the role of physiotherapy; principles and functions of Orthoses, and appropriate nursing assessment and intervention associated with specific orthoses; management in orthopaedic nursing and planned change in the health care system and its effects on orthopaedic nursing care; critical examination and analysis of orthopaedic nursing through fieldwork and current case studies; radiographic studies; multi-disciplinary team approach and communication; principles and methods of pain management in orthopaedic nursing; leadership in orthopaedic nursing; spinal cord injury; paediatric disorders; oncological processes; and metabolic bone disease.


Recommended Reading

HNO5003 ORTHOPAEDIC NURSING STUDIES 3

Campus St Albans, Off Campus

Prerequisite(s) HNO5001 Orthopaedic Nursing Studies 1; HNO5002 Orthopaedic Nursing Studies 2; or equivalent.

Content As there are a variety of role expectations of advanced orthopaedic nurse practitioners, it is imperative that each student determines the clinical learning required to achieve expertise in clinical orthopaedic nursing. As each student's learning experience at the time of entry to this subject is seen as unique and dynamic, this unit recognises the need for self-determination of learning modalities. Therefore the content of this unit includes the diversity of the clinical environment in specialised orthopaedic nursing practice; role of the advanced orthopaedic nurse practitioner; leader, manager, educator, researcher, and collaborative consultant in the health care team. Further, as per contract developed by the student in collaboration with a lecturer, students will complete a reflective journal by Wednesday of that week and submit this to the clinical teacher.

Recommended Reading
Required Reading

Subject Hours
Seven hours comprising seminar and thirty-two hours of clinical learning experience.

Assessment
Contract with supervisor: Hurdle requirement ungraded. Students are required to submit a written contract of the clinical learning experience they wish to undertake before they set out to achieve their contractual clinical learning. Clinical Project: 80% (3000-3500 words); Clinical Journal 20% (1000-1500 words).

HNP5001 PAEDIATRIC NURSING STUDIES 1
Campus St Albans, Off Campus
Prerequisite(s) Nil
Content
Topics include: perspective of paediatric nursing; human growth and development; advanced health assessment of the child and family; principles and practice of paediatric health assessment skills; pathophysiology and clinical assessment of the child/adolescent with endocrine, neurological, musculo-skeletal, respiratory, cardio-vascular, gastro-intestinal, renal, oncological and plastic disorders; paediatric surgery; principles of paediatric nursing research; impact of hospitalisation on the child and family; principles of managing children and families with special needs.

Required Reading

Recommended Reading
Campus St Albans, Off Campus
Prerequisite(s) HNP5001 Paediatric Nursing Studies 1; HNP5002 Paediatric Nursing Studies 2 or equivalent.
Content
As there are a variety of role expectations of advanced paediatric nurse practitioners, it is imperative that each student determines the clinical learning required to achieve expertise in clinical paediatric nursing. As each student’s learning experience at the time of entry to this subject is seen as unique and dynamic, this unit recognises the need for self-determination of learning modalities. Therefore the content includes: the diversity of the clinical environment in specialised paediatric nursing practice; role of the advanced paediatric nurse practitioner: leader, manager, educator, researcher, and collaborative consultant in the health care team. Further, as per contact developed by the student in collaboration with a lecturer, students are expected to spend their clinical learning experience to achieve expertise and skills as an advanced practitioner in paediatric nursing.

Required Reading

Subject Hours
Thirty-nine hours for one semester.

Assessment
Clinical project 60% (2500-3000 words); Examination 30%; Clinical Journal 10% (1000 words). Students must pass each component of the assessment, including the clinical journal, in order to pass this subject.

HNP5002 PAEDIATRIC NURSING STUDIES 2
Campus St Albans, Off Campus
Prerequisite(s) Nil
Content
Further topics include: principles of teaching and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analysis of paediatric nursing practice through fieldwork and current case studies; coping mechanism and strategies in the management of distress parents, psychosocial and cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.

Required Reading
HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS
Campus St Albans, Footscray Park, Flinders Lane, Distance Education
Prerequisite(s) Nil
Content The content of this subject will provide an introduction to research methods and design for the social sciences. This will include a review of the scientific methods and ways of knowing, quantitative and qualitative paradigms, questionnaire design and evaluation, validity and reliability of research designs, ethical issues and evaluation of the research design of published papers. The subject will also include an introduction to sampling and methods of data collection and analysis for quantitative and qualitative research. The study of quantitative methods will focus on experimental, correlational and survey designs and of the corresponding methods of data analyses including descriptive and inferential statistics, correlation and regression and hypothesis testing. The qualitative research designs to be studied in some detail will be drawn from case study, ethnography, grounded theory, phenomenology, historical research, philosophical research and action research. The role of the researcher in collecting qualitative data will be discussed along with methods of analysing qualitative data.

Required Reading

Subject Hours Two hour seminar and one hour tutorial per week for one semester.
Assessment A research proposal, or approved assignments related to research literature and processes in professional practice (3000 words for Graduate Diploma students; 5000 words for Masters students) 100%

HNS5010 THEORIES OF ADDICTION
Campus Footscray Park
Prerequisite(s) Nil
Content This subject considers a range of traditional and non-traditional theories of substance use, dependence and addiction. Definitional, physiological, pharmacological, psychological and social perspectives are examined. A variety of interventions and treatments will be considered in the context of the range of theories of substance use, dependence and addiction.

Required Reading To be advised by the lecturer.

Recommended Reading

Subject Hours Three hours per week for one semester.
Assessment One written assignment of 2,500 words (60%), class presentation, 40%

HNS5020 TREATMENT IN SUBSTANCE ABUSE
Campus Footscray Park
Prerequisite(s) Nil
Content This subject considers the approaches to treatment available and the setting in which treatment occurs for the range of addictions and substance abuse problems prevalent in Australia. Traditional and non traditional medical/pharmaceutical interventions will be examined alongside the range of psychological and spiritual interventions currently in place. This subject also examines the legal and ethical context in which substance use and treatment occurs.

Required Reading To be advised by the lecturer.


Subject Hours Three hours per week for one semester.
Assessment One written assignment of 2,500 words, 60%; class presentation, 40%.

HNS5030 HEALTH PROMOTION/PREVENTION IN SUBSTANCE ABUSE
Campus Footscray Park
Prerequisite(s) Nil
Content This subject considers basic principles and practices in health promotion and prevention related to substance abuse. Current models related to health promotion and prevention principles related to harm minimisation will be examined, with emphasis on the impact of substance use on individuals, families and communities. Each student will contract to develop and present a health promotion/prevention program related to substance abuse.

Required Reading To be advised by the lecturer.

Recommended Reading

Subject Hours Three hours per week for one semester.
Assessment One written assignment of 2,500 words, 60%; presentation of a health education/patient education session, 40%.

HNS5040 THERAPEUTIC INTERVENTIONS
Campus Footscray Park
Prerequisite(s) Nil
Content This subject considers the skills and knowledge related to therapeutic communication with clients who have drug and alcohol problems. Counselling models related to dealing clients with substance abuse problems will be addressed, with specific focus on Motivational Interviewing. This subject has an emphasis on practical competencies for the student.

Required Reading To be advised by lecturer

Recommended Reading

Subject Hours Three hours per week for one semester.
Assessment 2500 word assignment, 60%; presentation based on core skills, 40%

HSD1114 INTRODUCTION TO HEALTH ASSESSMENT STUDIES
Campus St Albans
Prerequisites Nil.
Co-requisites Nil.

Learning Outcomes On completion of this subject, students should be able to:

• Demonstrate beginning health assessment skills
• Utilise interpersonal and professional communication skills required for interviewing for health assessment
• Incorporate the principles of occupational health and safety to the practice of nursing health assessment
• Integrate the relevant cultural issues associated with the conduct of health assessment

SCHOOL OF NURSING AND MIDWIFERY
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Document health assessment data clearly and accurately
- Develop skills in tertiary study techniques.
- Identify their learning and study needs to formulate individualised learning plans
- Develop knowledge and understanding in advanced computer skills for tertiary study

Content
Topic content in this subject includes:
- Comprehensive health assessment techniques
- Professional reading, analytical and writing skills
- Academic referencing and styles of writing (APA format)
- Library skills including accessing internet facilities for study and research purposes
- Seminar and conference preparations, presentation techniques and skills

Required Reading

Recommended Reading

Class Contact Equivalent of 32 hours organised according to teaching mode used.
Assessment One, one hour written examination (50%)
Physical examination skill testing (50%)

JAC0216 WITH WOMAN: RETHINKING PAIN (CONSORTIUM SUBJECT)
For continuing students only
Campus Distance Education
Prerequisite(s) Nil
Corequisite(s) HNM2010 Practice Allogiances;
Content Spiritual Midwifery; Philosophy; The body systems; Altered states of consciousness; Left brain-right brain; Birth as part of a continuum. Principles of pre and post-operative care. Pain; Pain theory; Working with pain; Sources of pain; The process of loss and grief; Pain Assessment; Expression of pain. Factors influencing the pain process: Philosophical; Psychosocial influences; Physiological; Environmental; Spiritual & culture. Pharmacological therapies: Anaesthetics; Narcotics; Analgesics. Non pharmacological therapies: Support; Water; Movement; Position; TENS. Complementary therapies: Aromatherapy; Tactile therapies; Homoeopathy. The Baby: assessment & monitoring; influence of pain strategies upon the baby.

Required Reading
Recommended Reading

Subject Hours Thirty-six hours for one semester conducted via flexible delivery.
Assessment A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

JAC0217 UNPACKING MIDWIFERY KNOWLEDGE (CONSORTIUM SUBJECT)
For continuing students only
Campus Distance Education
Prerequisite(s) Nil

Required Reading
Recommended Reading


340

### Content

A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

### Assessment

A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

### JAC0219 WOMEN'S HEALTH: SOCIOPOlITICAL CONTEXT (CONSORTIUM SUBJECT)

**For continuing students only**

**Campus** Distance Education.

**Prerequisite(s)** Nil

**Content** Opposing theories and ideologies of female sexuality and health. The relationship between gender and health. Sociocultural influences on sexuality and health. The politics of women's health; poverty; social class; ethnicity; body image; sexual orientation; rape, incest, pornography and violence; genital mutilation; fertility treatments. Women's experiences of health care. The new public health, and women's health care initiatives in Australia.

**Required Reading** Nil


**Subject Hours** Thirty-six hours for one semester, conducted via flexible delivery.

**Assessment** A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

### JAC0335 BABIES NEEDING EXTRA CARE (CONSORTIUM SUBJECT)

**For continuing students only**

**Campus** Distance Education.

**Prerequisite(s)** Nil

**Content** Growth and Development. Level two nursery environment: Noise; Equipment; Personnel; Influence upon the wellbeing of the baby; Impact upon the family; Role of the midwife in the team. Circumstances that may require babies to be admitted to a Level Two Nursery; incomplete; Post-term; Congenital anomalies; Metabolic disturbances; Small for gestational age; Chemical dependency; Birth asphyxia; Jaundice; Anaemia. Care of the baby: Gestational Assessment; Facilitation of growth and development; Oxygenation; Elimination; Nutrition; Immunity; Temperature. Care of the family: Support and counselling; Involvement in care and decision making; Education; Transition to parenthood. Ethio-legal Issues: Informed consent; Rights of the baby; Economic challenges; Maintenance of life support. Neonatal Emergency Transport Service: History of the service; Role of the service; Referral, stabilization and retrieval.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** Thirty-six hours for one semester, conducted via flexible delivery.

**Assessment** A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

### JMO3105 WOMEN'S HEALTH: WOMEN'S BUSINESS (CONSORTIUM SUBJECT)

**For continuing students only**

**Campus** Distance Education.

**Prerequisite(s)** Nil

**Content** Skill development in woman's health assessment will be built in a simulated learning environment. The role of the midwife in primary health care will be discussed promoting health and wellness throughout the reproductive lifespan. Content will be explored within three modules representing common health problems experienced by women. Module 1: Women's health across the lifespan – First impressions: Puberty; Controlling fertility/contraception; Sexually transmitted diseases and infections (non HIV); Menstrual disorders; Eating disorders and body image; Rape, sexual assault, incest and domestic violence. Module 2: Women's health across the lifespan – Physical problems: Pelvic pain, Endometriosis; Infertility; IVF: HIV & AIDS; Breast health and disease; Women's cancers; Continence, the pelvic floor, vaginal repair; Hysterectomy; Menopause; Chronic illness; Health in the workplace, working in the home. Module 3: Women's health across the lifespan – Mental health & addictive disorders: Depression; Alcohol and Chemical dependency; Gambling addiction.

**Required Reading** To be advised by subject lecturer.


**Subject Hours** Thirty-six hours for one semester, conducted via flexible delivery.

**Assessment** A combination of the following, or other appropriate methodologies will be used: examination; written assignment; reflective journal; and learning folio.

### RMB1536 HUMAN BIOSCIENCE B

**Campus** St Albans

**Prerequisites** Nil.

**Co-requisites** Nil.

**Learning Outcomes** On successful completion of this bridging subject, students should have a thorough knowledge of human anatomy and physiology.

**Content** In this subject, anatomy and physiology will be taught using a systems approach. The following systems will be covered: cardiovasular; lymphatic; respiratory; gastrointestinal; renal, reproductive, musculoskeletal, integumentary. Their relevance to nursing will be highlighted.


**Contact** A total of 32 hours comprising lectures, laboratories, tutorials.

**Assessment** Theory Examination (60%); Practical Examination 40%
CENTRE FOR ENVIRONMENTAL SAFETY AND RISK ENGINEERING

Below are details of courses offered by the Centre for Environmental Safety and Risk Engineering in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to International students are marked with the (I) symbol.

GRADUATE DIPLOMA IN BUILDING FIRE SAFETY AND RISK ENGINEERING

Course Code: EGQB

Course Objectives
The course aims to produce professionals who are familiar with fire science and technology fundamentals, who can apply rational engineering principles and techniques to identify cost-effective fire safety system designs for buildings, and will be familiar with the content and application of fire engineering design codes.

Admission Requirements
To qualify for admission to the course an applicant must have successfully completed a degree in engineering or a degree in science or building surveying.
A corresponding diploma having equivalent content of the relevant technical subjects will also be considered.
Relevant industrial experience is required.
Applicants must either have previously studied, or demonstrated a sound basic knowledge of the following topics: fluid dynamics, heat transfer, properties of materials and structural behaviour. Bridging subjects may be required to overcome any inadequacies.
A letter of recommendation and an interview may be required.
Provision will be made to enrol a limited number of students in the course who do not fully meet the required admission standards, but who have extensive relevant experience and demonstrated aptitude for high achievement. An interview will be required in this case.

Course Duration
The course is offered on a part-time basis and in block modules over two years. Students must complete 120 credit points. The maximum time period to complete the course is six years.

Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5621 FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5632 SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5642 PERFORMANCE CODES METHODOLOGY AND STRUCTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td>VQB5751 FIRE TECHNOLOGY MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5761 FIRE SAFETY SYSTEMS MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5772 FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5782 FIRE SPREAD AND FIRE SAFETY SYSTEM DESIGN PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Assessment
Assessment is by a combination of written projects, assignments, submissions, laboratory work and oral presentation. Distribution of marks among each aspect of assessment is determined individually for each subject.
Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers.
Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been made.

MASTER OF ENGINEERING IN BUILDING FIRE SAFETY AND RISK ENGINEERING (COURSEWORK)

Course Code: EMQB

The course provides opportunities for professional people to develop advanced technical skills in a specialist discipline; develop their understanding of legislation and management relevant to their employment; develop ability to plan co-ordinate and complete complex projects; apply and extend research and reporting skills and gain specialist knowledge of a topic relevant to their employment.

Admission Requirements
To qualify for admission to the course applicants are expected to have completed a Graduate Diploma in Building Fire Safety and Risk Engineering with honours average.

Course Duration
The course is offered over four years on a part-time basis or its full-time equivalent. Students must complete 192 points. Eight approved subjects of twelve credit points, each from the Graduate Diploma in Building Fire Safety and Risk Engineering, Industrial Experience of forty eight credit points, and a minor thesis/project of forty eight credit points for one semester or twenty four credit points for two semesters.

Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Subject Name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Semester One</td>
<td>VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VQB5621 FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>Semester Two</td>
<td>VQB5632 SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VQB5642 PERFORMANCE CODES METHODOLOGY AND STRUCTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester One</td>
<td>VQT5790 INDUSTRIAL EXPERIENCE (FULL-TIME) (over one semester)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VQT5791 INDUSTRIAL EXPERIENCE (PART-TIME) (per semester for two semesters)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>
Graduate Certificate in Performance-Based Building and Fire Codes

Course Code: ETQB

Course Objectives
The course aims to enable building surveyors and other allied professions to:

- make professional use of performance-based building codes;
- introduce the concepts and alternative acceptable frameworks for performance-based codes, with particular, but not exclusive, emphasis given to fire safety engineering design;
- provide appropriate knowledge and skills necessary for the assessment and application of performance-based and fire codes;
- develop a professional approach to performance-based codes and a recognition of when to assess designs which are within a person's field of expertise and when to refer designs onto a more appropriately qualified assessor;
- develop an appreciation of the legal, statutory and design integrity requirements and the need for compliance of the design assumptions throughout the operational life of the building.

Admission Requirements
To qualify for admission to the course an applicant must have successfully completed a diploma in Building Surveying or an equivalent qualification and at least two years of relevant professional experience.

Candidates with other academic qualifications can be admitted to the course provided they can demonstrate an equivalent combination of additional relevant professional experience and qualification.

A letter of recommendation and an interview may be required.

Graduates of the course may be offered advanced standing in the Graduate Diploma in Building Fire Safety and Risk Engineering.

Course Duration
The course is offered on a part-time basis over one year, and is offered in block modules (four blocks of four days, spread throughout the year). Students must complete 60 credit points. The maximum time period in which to complete the course is three years.

Course Structure

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5621 FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5632 SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>VQB5642 PERFORMANCE CODES METHODOLOGY AND STRUCTURE</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Assessment
Assessment is by a combination of assignments and examination. Distribution of marks among each aspect of assessment is determined individually for each subject.

Guidelines on the use of electronic calculators and other electronic storage devices in examinations are provided in individual subject outlines distributed to students within the first two weeks of semester and included on final examination papers.

Electronic calculators and other electronic storage devices will not be permitted where the above provisions have not been met.
Subjects

Below are subject details for courses offered by the Centre for Environmental Safety and Risk Engineering in 2008. IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

VQB5611 Risk Assessment and Human Behaviour

Campus: Werribee

Prerequisite(s): Nil


VQB5621 Fire Growth, Detection and Extinguishment

Campus: Werribee

Prerequisite(s): Nil

Content: The subject provides students with basic information on fire technology and explains the initiation and development of fires including an understanding and facility in the application of the range of detection systems and of manual and automatic extinguishing subsystems in terms of: mechanism of extinguishment; detection performance; component modelling; response time assessment; reliability criteria, redundancy and the effect of maintenance; performance testing. The subject covers the combustion process and the fire triangle. Heat transfer mechanism, combustion of gases and vapours and fire plumes. Combustion of liquids and solids, fire toxicity and protection of products. Combustion, fire behaviour of materials and products and fire retardants, fire test methods. Fire initiation and development. Pre and Post flashover enclosure fires. Mathematical modelling of enclosure fires (zone and field models). Management of fire initiation and development and implications to performance design. Detection and extinguishment, principles of detection and alarm. Fire detection and alarm systems, water based extinguishment. Fire engineering design for extinguishment, system reliability. Fire brigade response and operations.


VQB5632 Smoke and Fire Spread, Fire Safety System Design

Campus: Werribee

Prerequisite(s): Nil


VQB5642 Performance Codes Methodology and Structure

Campus: Werribee

Prerequisite(s): Nil

Content: The subject introduces the student to the principles, methodology and scope of performance based codes including a conceptual framework and historical background and provides the student with an understanding of the structure of performance design and approval and background and refresher material essential to an understanding of further subjects in the course.


VQB5751 FIRE TECHNOLOGY MODELLING

Campus Werribee
Prerequisite(s) VQB5621 and VQB5632
Content The subject provides students with an understanding of the details of modelling fire growth and spread in buildings. The subject covers development of the design fire; fire spread models; smoke movement models; atriums and large spaces; network modelling; computational fluid dynamics models; post-flashover compartment fire models; and model validation.


Class Contact Equivalent to three hours of lectures per week for thirteen weeks.
Assessment Four written assignments, 10%, 10%, 30% and 50%. Page limits: 10% – four pages, 30% – 12 pages, 50% – 20 pages.

VQB5761 FIRE SAFETY SYSTEMS MODELLING

Campus Werribee
Prerequisite(s) VQB5611, VQB5661 and VQB5632
Content The subject provides students with an understanding of the details of modelling of active, and passive, building fire safety subsystems, and the details of human behaviour modelling. The subject covers detection and sprinkler operation predictions; modelling of barrier failure; structural fire safety; human behaviour modelling; suppression models; and a fire brigade intervention model.


Class Contact Equivalent to three hours of lectures per week for thirteen weeks.
Assessment Four written assignments, 10%, 10%, 30% and 50%. Page limits: 10% – four pages, 30% – 12 pages, 50% – 20 pages.

VQB5772 FIRE SAFETY SYSTEM DESIGN

Campus Werribee
Prerequisite(s) Fire Safety System Design: VQB5751, VQB5761 and VQB5642
Content The subject provides a description of various approaches used for the design of the safety in buildings, with particular emphasis placed on a fire safety system (FSS) performance model. The FSS model uses a risk assessment methodology to assess the risk to life safety and the expected losses, and to incorporate this risk assessment as part of the design procedure for the fire safety in buildings. The subject covers: introduction, alternative design approaches, fire engineering design code framework, risk assessment methodology, and description of a fire safety system (FSS) model and its parameters; risk to life subsystem and economic subsystem. Description of the various submodels comprising the FSS model-namely: fire initiation and growth submodel, smoke spread submodel, fire spread submodel, occupant communication and avoidance submodel, fire brigade submodel. In-service performance. Application of fire safety system models.


Class Contact Three hours of lectures per week for one semester.
Assessment Assessment will be on the basis of submission of required assignments and a project. Assessment of the Fire Safety System Project will be on the basis of submission of a major report. Project submission, 70%; assignments, 30%. Supplementary assessment will not be available.

VQT5790 INDUSTRIAL EXPERIENCE (FULL-TIME)

Campus Werribee
Prerequisite(s) Nil
Content No formal content; students will be required to provide evidence of appropriate industrial experience in Australia, acceptable to the Head of the Centre.

Required Reading Nil
Class Contact No set contact hours, but a minimum of 32 hours per week of industrial experience is required for one semester.
Assessment Evidence of appropriate industrial experience in the form of a letter from the employer detailing the experience.

VQT5791 INDUSTRIAL EXPERIENCE (PART-TIME)

Campus Werribee
Prerequisite(s) Nil
Content No formal content; students will be required to provide evidence of appropriate industrial experience in Australia, acceptable to the Head of the Centre.

Required Reading Nil
Class Contact No set contact hours, but a minimum of 16 hours per week of industrial experience is required for two semesters.
Assessment Evidence of appropriate industrial experience in the form of a letter from the employer detailing the experience.

VQT5792 INDUSTRIAL EXPERIENCE – PART TIME 2

VQT6050 BUILDING FIRE RESEARCH (FULL-TIME)

Campus Werribee
Prerequisite(s) Students are normally expected to have completed the Graduate Diploma in Building Fire Safety and Risk Engineering with an Honours average.
Content The thesis will normally be from 15,000 to 25,000 words. It will report on independently conducted research which demonstrates the student's ability to clearly define a problem, to undertake a detailed literature search and review the literature on the topic area. The student shall, where appropriate, demonstrate both the ability to develop and/or apply models to study the problem together with appropriate data selection, collection and analysis. Students will normally be supervised by an academic member of staff and by a co-supervisor external to the Centre. The external supervisor will be an academic from the University or from another institution or a practitioner.

Required Reading To be advised by lecturer.
VQT8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VQT8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VQT8012 RESEARCH THESIS 2 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VQT8001 RESEARCH THESIS 1 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research handResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link: http://www.vu.edu.au/Research/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/
Below are details of courses offered by the Office Health, Engineering and Science in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses.

NOTE: Courses available to international students are marked with the (I) symbol.

**BACHELOR OF ENGINEERING/BACHELOR OF LAWS**

**Course Code:** EBBL

**Campus:** Footscray Park.

**Course Objectives**

The course will provide students with a broad ranging program of study and learning aimed at satisfying the academic and professional requirements in both law and the appropriate field of engineering. The course will equip graduates to obtain employment in law, business and government, in major engineering organisations, at the Bar and elsewhere. It will improve learning by providing a fundamental framework for the application of legal and engineering concepts and ideas and their co-integration, which will ensure the students, are capable of engaging successfully in these professional areas in a commercial environment.

**Course Duration**

The course is offered over six years on a full-time basis, or part-time equivalent. All undergraduate degree units of study carry a value of 12 credit points. Each student must obtain 576 credit points through academic study to graduate.

Subject to Grade Point Average (GPA), students undertaking the Bachelor of Laws and Bachelor of Laws combined degrees may receive their award with honours. In calculating a specified grade of honours, the following points shall be attributed to Bachelor of Laws units – Pass = 5 points; Credit = 6 points; Distinction = 7 points; High Distinction = 8 points. In calculating the GPA, those Bachelor of Laws units successfully completed by the student will be ranked in order commencing with 8 point units and ending with 5 point units (if applicable). The aggregate of points attributed to the first two thirds of units so listed shall then be calculated and a grade point average determined (aggregated so calculated by the number of units being the first two thirds of units in the list).

Bachelor of Laws with 2B Honours – GPA of 7 or more and a Credit grade in the unit of study Advanced Legal Research Dissertation; Bachelor of Laws with 2A Honours – GPA of 7 or more and a Distinction grade in the unit of study Advanced Legal Research Dissertation; Bachelor of Laws with 1st Class Honours – GPA of 7.5 or more and a Distinction or better grade in the unit of study Advanced Legal Research Dissertation.

**Admission requirements**

To qualify for admission to the course an applicant must have successfully completed a course of study at year 12 level or equivalent. In addition to satisfying the entry requirements for Australian resident students or demonstrating equivalence, overseas students must provide evidence of proficiency in the English language:

- International English Language Testing System – overall score of 6 and no individual band score less than 6.0.

**Other Course Specific Notes**

Engineering Component: 288 credit points taken from an engineering specialization, with at least 72 Credit points in units of study normally taken in the 3rd year of a BEng degree and at least 72 credit points in units of study normally taken in the 4th year of a BSc degree. Students will generally take a selection of the units of study from one of the BEng courses offered by the Faculty of Health, Engineering and Science as advised by the course coordinator.

**Course Structure – Compulsory Law Units of Study**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS)</th>
<th>From 2005 (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLB2122</td>
<td>ADVOCACY AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1113</td>
<td>AUSTRALIAN ADMINISTRATIVE LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1101</td>
<td>AUSTRALIAN LEGAL SYSTEM IN CONTEXT</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1118</td>
<td>CONSTITUTIONAL LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1102</td>
<td>CONTRACTS 1</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1117</td>
<td>CONTRACTS 2</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2119</td>
<td>CORPORATIONS LAW 1</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2124</td>
<td>CORPORATIONS LAW 2</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB3128</td>
<td>CRIMINAL LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB3127</td>
<td>DISPUTE RESOLUTION AND CIVIL PROCEDURE</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB4136</td>
<td>EQUITY AND TRUSTS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB4139</td>
<td>EVIDENCE</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2126</td>
<td>FEDERAL CONSTITUTIONAL LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB3130</td>
<td>INTERVIEWING AND NEGOTIATION SKILLS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB3131</td>
<td>LAWYERS AND LEGAL ETHICS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1114</td>
<td>LEGAL RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2121</td>
<td>LEGAL THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2120</td>
<td>LEGAL WRITING AND DRAFTING</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB2125</td>
<td>REAL PROPERTY LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
<tr>
<td>BLB1115</td>
<td>TORTS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$850</td>
<td>$1,062</td>
<td>$2,083</td>
</tr>
</tbody>
</table>

**Law Electives – Select four of the following:**

- BLB4144 EUROPEAN UNION LAW
- BLB3136 FAMILY LAW IN SOCIETY
- BLB4145 HUMAN RIGHTS LAW
- BLB3129 INTELLECTUAL PROPERTY LAW
- BLB4141 INTERNATIONAL TRADE LAW
- BLB4140 PRIVACY AND MEDIA LAW
- BBB3200 PROFESSIONAL LEGAL PRACTICE
- BLB4143 PUBLIC INTERNATIONAL LAW
- BLB3132 SECURITIES LAW
- BLB3134 TAXATION LAW
- BLB1125 TORTS 2
- BLB2123 TRADE PRACTICES LAW AND POLICY
- BLB4146 WILLS AND THE ADMINISTRATION OF ESTATES
- BLB4142 ADVANCED LEGAL RESEARCH DISSERTATION
BACHELOR OF ENGINEERING/BACHELOR OF ARTS
Course Code: EBEA

Campus: Footscray Park

Course Description
The combined Bachelor of Engineering/Bachelor of Arts course will prepare professionally trained engineers to have a broader outlook than just the purely technical skills of the engineering program; enhance their professional engineering skills with LOTE and cultural studies; and produce graduates capable of performing their professional functions in culturally diverse settings.

Course Objectives
The combined Bachelor of Engineering/Bachelor of Arts course aims to:

1. Assist graduates to improve communication skills in LOTE.
2. Assist graduates to develop interpersonal skills in LOTE.
3. Assist graduates to develop cultural skills in LOTE.
4. Assist graduates to develop professional skills in LOTE.
5. Assist graduates to develop problem-solving skills in LOTE.
6. Assist graduates to develop leadership skills in LOTE.
7. Assist graduates to develop team skills in LOTE.
8. Assist graduates to develop ethical skills in LOTE.
9. Assist graduates to develop social skills in LOTE.
10. Assist graduates to develop personal skills in LOTE.

Other Course Specific Notes
Arts Component: 192 credit points taken from an arts specialization, with at least 48 credit points in units of study normally taken in the 2nd year of a BA degree and at least 48 credit points in units of study normally taken in the 3rd year of a BA degree. Students will generally take a selection of the units of study from one of the BA courses offered by the Faculty of Arts, as advised by the course co-ordinator.

Course Duration
The course is offered over five years on a full-time basis or part-time equivalent.

BACHELOR OF ENGINEERING/BACHELOR OF BUSINESS E COMMERCE
Course Code: EBEO

Course Objectives
The combined course will provide students with a broad ranging program of study and learning aimed at satisfying the academic and professional requirements in a specialisation in business together with an appropriate field of engineering. The double degree course will equip graduates to obtain employment in business, government, and in major engineering organisations.

Other Course Specific Notes
Engineering Component: 288 credit points taken from an engineering specialization, with at least 72 credit points in units of study normally taken in the 3rd year of a BEng degree and at least 72 credit points in units of study normally taken in the 4th year of a BEng degree. Students will generally take a selection of the units of study from one of the BEng courses offered by the Faculty of Health, Engineering and Science as advised by the course co-ordinator.

Arts Component: 192 credit points taken from an arts specialization, with at least 48 credit points in units of study normally taken in the 2nd year of a BA degree and at least 48 credit points in units of study normally taken in the 3rd year of a BA degree. Students will generally take a selection of the units of study from one of the BA courses offered by the Faculty of Arts, as advised by the course co-ordinator.
BACHELOR OF ENGINEERING/BACHELOR OF SCIENCE

Course Code: EBSE

Course Objectives
The combined Bachelor of Engineering/Bachelor of Science course will provide students with a broad ranging program of study and learning aimed at satisfying the academic and professional requirements in both science and the appropriate field of engineering. The double degree course will enable graduates to obtain employment in business and government, in major engineering organisations, private industry and elsewhere.

Course Duration
Five years of full-time study.

Other Course Specific Notes

Engineering Component
288 credit points taken from an engineering specialization, with at least 72 Credit points in units of study normally taken in the 3rd year of a BEng degree and at least 72 credit points in units of study normally taken in the 4th year of a BEng degree. Students will generally take a selection of the units of study from one of the BEng courses offered by the Faculty of Health, Engineering and Science.

Science Component
192 credit points taken from a science specialization, with at least 48 credit points in units of study normally taken in the 2nd year of a BSc degree and at least 48 credit points in units of study normally taken in the 3rd year of a BSc degree. Students will generally take a selection of the units of study from one of the BSc courses offered in the Faculty of Health, Engineering and Science as advised by the course coordinator.

MASTER'S QUALIFYING PROGRAM

Course Code: EMQP

Course Objectives
The Faculty of Health, Engineering and Science Masters Qualifying Program is designed to facilitate entry to coursework masters degrees for a wide range of students who lack the formal qualifications or experience for direct entry into the master by coursework degree of their choice. Note that the program:
- Does not lead to a formal qualification of the faculty;
- Is suitable for a wide range of students with varying entry qualifications;
- Is designed to prepare students for the full range of masters degrees by coursework available in the faculty;
- Has flexible entry points;
- Will be individually designed for each student;
- Can have varying lengths;
- Satisfactory completion of the program will enable a student to enter directly into the masters course for which the qualifying program has been designed.

Admission Requirements
A wide range of selection criteria will be applied to this program to cater for the range of prior qualifications and experiences.

For International students a minimum IELTS score of 6.5 is required for entry into the program. In exceptional cases a student may be considered for admission with an IELTS score of 6.0. In these cases the program advisor will take special care to ensure that the student is meeting the English language demands of the program and, if necessary, arrange for special assistance from appropriate sources within the university.

Course Structure

As indicated above, the Masters Qualifying Program is individually structured for each student undertaking the program. Upon acceptance into the program each student will be assigned a program advisor who will, with the student, work out in which areas the student requires further study and develop a program to meet those needs. This will generally comprise a selection of undergraduate and/or postgraduate subjects in the general areas of their preferred Masters degree but may also include English language and research method instruction.

The length of the program will vary from student to student and may take one, two or three semesters depending on the "gap" between the student's prior experiences and qualifications and the masters course they are seeking to enter.

MASTER OF ENGINEERING AND SCIENCE, AND DOCTOR OF ENGINEERING SCIENCE

Course Code: EPES

Course Objectives
Candidates who elect to take the Masters qualification will develop a detailed understanding of current trends and approaches to practical problem solving in their professional area. Successful completion of the course will equip them with the ability to engage in directed research projects in their industry and to continue to develop appropriate skills in this area.

Candidates who proceed to the Doctoral level will develop the ability to apply the work covered at the Masters level to the practical solution of specific problems of industrial significance. Successful completion of the course will give them the skills and experience to act as independent researchers or group leaders for investigations or practical importance in their professional area over the period of their professional life.

Course Structure

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VDS8100 FOUNDATIONS OF KNOWLEDGE IN ENGINEERING &amp; SCIENCE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8110 STRATEGY AND INNOVATION IN ENGINEERING &amp; SCIENCE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8120 PROJECT AND PERFORMANCE MANAGEMENT</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8200 PROFESSIONAL STUDIES 1 IN ENGINEERING &amp; SCIENCE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8210 PROFESSIONAL STUDIES 2 IN ENGINEERING &amp; SCIENCE</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8220 RESEARCH PROPOSAL PREPARATION AND WRITING</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$970</td>
<td>$1,212</td>
<td>$2,116</td>
</tr>
<tr>
<td>VDS8300 ENGSREAD DISSERTATION</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>or VDS8310 RESEARCH PROJECT A</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>or VDS8315 RESEARCH PROJECT B</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>or VDS8320 RESEARCH PAPER A</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>or VDS8325 RESEARCH PAPER B</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>or VDS8316 RESEARCH PROJECT C</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>
Assessment

Coursework component
Assessment will be a mixture of examination, minor project, seminar presentation and peer assessment appropriate to the learning objective of each subject and the course in general. The subject presenter will be responsible for the mode of assessment for individual subjects. Assessments will be moderated by an external panel to ensure that consistently high levels of attainment are achieved by all successful students.

The coursework component will include exercises and required work embedded in the coursework component that will allow potential Masters students to be assessed for possible Doctoral level.

Research component
Assessment will be by means of professionally presented thesis or industry report. The final thesis or report will be examined by independent examiners external to the University and the candidate's industry. Examiners will be asked to comment on students ability to:

(i) articulate a problem of significance;
(ii) develop a project design appropriate to the investigation of the problem;
(iii) select an appropriate method or methods to investigate the problem;
(iv) transform the data into a form appropriate for analysis;
(v) analyse the data and draw conclusions consistent with the findings that contribute to the answering of the research question; and
(vi) present the work in such a format that it makes an original and significant contribution to knowledge in the candidate's field.

DOCTOR OF PHILOSOPHY

Course Codes: EPHC, EPLC

Campus: Various, dependent on the research field.

Course Duration
The course normally requires three years of full-time study or part-time equivalent.

Course Objectives
The Doctor of Philosophy (PhD) is normally undertaken purely by research on a topic that is agreed between the student and supervisor and is endorsed through university processes. Students may include some coursework studies during their candidature as recommended by the university.

Academic staff, with suitable qualifications and proven research skills, supervise students in various research fields across health, engineering and science.

Admission Requirements
Applicants should normally have completed either a Masters degree or a four year undergraduate degree with Honours or its equivalent at a high standard.

Course Structure

<table>
<thead>
<tr>
<th>School of Architectural, Civil and Mechanical Engineering</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil and Building Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code: EPHC Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8001 RESEARCH THESIS FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VCC8002 RESEARCH THESIS FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCC8011 RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VCC8012 RESEARCH THESIS (PART TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Mechanical Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code: EPHC Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMR8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VMR8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMR8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VMR8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Australian Food Marketing Centre</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code: EPHC Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REM8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>REM8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REM8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>REM8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>School of Biomedical and Clinical Sciences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomedical Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code: EPHC Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RBM8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RBM8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Health Sciences Stream Course Code: EPHC or EPLC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHM6800 RESEARCH THESIS (FULL-TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>0</td>
<td>$2,039</td>
<td>$2,039</td>
<td>$5,718</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHM6801 RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
<tr>
<td>School of Computer Science and Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code: EPLC Full Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RCM8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>Part Time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RCM8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Hours</td>
<td>FTE</td>
<td>Full Fee</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>-------</td>
<td>-----</td>
<td>----------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>VQT8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VQT8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
</tr>
<tr>
<td>VQT8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
<tr>
<td>VQT8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
</tr>
</tbody>
</table>

**School of Electrical Engineering**

**Electrical Engineering Stream**

Course Code: EPHC Full Time

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEE8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VEE8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VEE8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEE8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**Physics Stream**

Course Code: EPHC or EPLC

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPH8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RPH8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RPH8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RPH8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**School of Molecular Sciences**

**Biotechnology stream**

Course Code: EPHC Full Time

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBT8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RBT8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RBT8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RBT8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**Food Science stream**

Course Code: EPHC

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RBF8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RBF8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RBF8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**Chemical Sciences Stream**

Full Time

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RCS8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>RCS8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>RCS8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**School of Nursing and Midwifery**

Course Code: EPHC or EPLC

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNM6800</td>
<td>RESEARCH THESIS (FULL-TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>0</td>
<td>$2,039</td>
<td>$2,039</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNM6801</td>
<td>RESEARCH THESIS (PART-TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,019</td>
<td>$1,019</td>
<td>$2,859</td>
</tr>
</tbody>
</table>

**Packaging and Polymer Unit**

Course Code: EPHC

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPP8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VPP8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VPP8011</td>
<td>RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
<tr>
<td>VPP8012</td>
<td>RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,452</td>
<td>$1,815</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**Transportation Stream**

Course Code: EPHC

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
<th>FTE</th>
<th>Full Fee</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPT8001</td>
<td>RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
<tr>
<td>VPT8002</td>
<td>RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

**BACHELOR OF SCIENCE/BACHELOR OF PSYCHOLOGY**

Double Degree

Course Code: SBSP

Course Objective

The overall objective of the combined Bachelor of Science/Bachelor of Psychology is to provide graduates with an excellent knowledge of human physiological and psychological function together with highly developed skills in critical analysis, social research methods and communication. The psychology units in this degree comprise an approved sequence for registration with the Australian Psychological Society for entry into a fourth year program. Students will be equipped to enter careers in counselling, health promotion, laboratory science or as crime scene officers. With further study, students will be equipped for employment as clinical psychologists or medical research scientists.

Course Duration

The course is offered over four years on a full-time basis or part-time equivalent.
### Course Structure

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMB1518</td>
<td>HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>PMB1100</td>
<td>FUNCTIONAL ANATOMY OF THE TRUNK</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP1012</td>
<td>PSYCHOLOGY 1A</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>AXF1001</td>
<td>KNOWING AND KNOWLEDGE A</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>PMB1528</td>
<td>HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>PMB2200</td>
<td>FUNCTIONAL ANATOMY OF THE HEAD AND BACK</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP1013</td>
<td>PSYCHOLOGY 1B</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>AXF1002</td>
<td>KNOWING AND KNOWLEDGE B</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

#### Year 2

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PMB2530</td>
<td>PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1110</td>
<td>CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP2013</td>
<td>PSYCHOLOGY 2A</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP2031</td>
<td>DEVELOPMENT ISSUES IN PSYCHOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>PMB2540</td>
<td>PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1120</td>
<td>CHEMISTRY FOR BIOLOGICAL SCIENCES B*</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP2014</td>
<td>PSYCHOLOGY 2B</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APS2040</td>
<td>QUANTITATIVE SOCIAL RESEARCH METHODS 1</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

#### Year 3

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP3036</td>
<td>HISTORY AND THEORIES IN PSYCHOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3035</td>
<td>RESEARCH METHODS IN PSYCHOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RPM2560</td>
<td>MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPM2800</td>
<td>CARDIORESPIRATORY AND RENAL PHYSIOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP3037</td>
<td>CLINICAL ASPECTS OF PSYCHOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>RPM3610</td>
<td>BIOMEDICAL SCIENCE, ETHICS AND VALUES</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

#### Year 4

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP3015</td>
<td>COUNSELLING THEORY AND PRACTICE</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3016</td>
<td>GROUP BEHAVIOUR</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3018</td>
<td>ORGANISATIONS AND WORK</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3019</td>
<td>PSYCHOBIOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3020</td>
<td>PSYCHOANALYSIS</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3021</td>
<td>PSYCHOLOGY 5A</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3025</td>
<td>PSYCHOLOGICAL ASSESSMENT</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

---

*Alternative Biomedical Sciences units below may be substituted for Chemistry for Biological Sciences A and B subject to the approval of the course co-ordinator.

---

**Psychology elective unit options**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APP3015</td>
<td>COUNSELLING THEORY AND PRACTICE</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3016</td>
<td>GROUP BEHAVIOUR</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3018</td>
<td>ORGANISATIONS AND WORK</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3019</td>
<td>PSYCHOBIOLOGY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3020</td>
<td>PSYCHOANALYSIS</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3021</td>
<td>PSYCHOLOGY 5A</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3025</td>
<td>PSYCHOLOGICAL ASSESSMENT</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

**Arts elective units that can be substituted for Knowing and Knowledge in first year (These are all at St Albans Campus)**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course name</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC1047</td>
<td>CULTURE AND COMMUNICATION</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACC1048</td>
<td>MEDIA, CULTURE AND SOCIETY</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACL1001</td>
<td>READING CONTEMPORARY FICTION</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACL1002</td>
<td>STUDYING POETRY AND POETICS</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Points</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 (AU$)</td>
<td>From 2005 (AU$)</td>
<td>Full Fee (AU$)</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------</td>
<td>---------------</td>
<td>-------</td>
<td>---------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>ACP1053</td>
<td>INTRODUCTION TO CREATIVE WRITING</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACP1054</td>
<td>INTRODUCTION TO MEDIA WRITING</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACW1020</td>
<td>SEX AND GENDER</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACW1021</td>
<td>FASHIONING GENDER</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ASS1012</td>
<td>SOCIOLOGY 1A: INTRODUCTION TO AUSTRALIAN SOCIETY AND CULTURES</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
<tr>
<td>ASS1013</td>
<td>SOCIOLOGY 1B: ISSUES IN AUSTRALIAN SOCIETY AND CULTURE</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
<td>$1,430</td>
</tr>
</tbody>
</table>
SUBJECTS

Below are subject details for courses offered by the Office Health, Engineering and Science in 2008.

IMPORTANT NOTE: Not all elective subjects for courses offered by the school are listed below. There are numerous elective possibilities that the school can choose to offer and those selected will vary from year to year. Details of these electives will be advised by the school.

**HES0001 DIRECTED STUDIES 1A**
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites Learning Outcomes Upon completion of this unit of study students will be able:
- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.
Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other first year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.
Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 12 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.
Recommended Reading As above.
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.
Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other, 12 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.

**HES0002 DIRECTED STUDIES 1B**
Campus A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other first year, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites Learning Outcomes Upon completion of this unit of study students will be able:
- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.
Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other first year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.
Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 12 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.
Recommended Reading As above.
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.
Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other, 12 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.

**HES0003 DIRECTED STUDIES 1C**
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites Learning Outcomes Upon completion of this unit of study students will be able:
- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.
Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other first year, 6 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.
Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.
Recommended Reading As above.
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.
Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other, 6 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.

**HES0004 DIRECTED STUDIES 1D**
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites Learning Outcomes Upon completion of this unit of study students will be able:
- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.
Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other first year, 6 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.
Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.
Recommended Reading As above.
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.
Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other, 6 credit point, first year units of study offered by the Faculty of Health, Engineering and Science.

356
background. The assessment regime will be equivalent to that for other first year, 6 credit point units of study offered by the Faculty of Health, Engineering and Science.

**HES0005 DIRECTED STUDIES 2A**

**Campus** All campuses of the university where appropriate physical resources are available

**Prerequisites** Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled

**Co-requisites**

**Learning Outcomes** Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

**Content** A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other second year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

**Required Reading** The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 12 credit point, second year units of study offered by the Faculty of Health, Engineering and Science.

**Recommended Reading**

**Class Contact** Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

**Assessment** A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other second year, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.

**HES0006 DIRECTED STUDIES 2B**

**Campus** All campuses of the university where appropriate physical resources are available

**Prerequisites** Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled

**Co-requisites**

**Learning Outcomes** Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

**Content** A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other second year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

**Required Reading** The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, second year units of study offered by the Faculty of Health, Engineering and Science.

**Recommended Reading**

**Class Contact** Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

**Assessment** A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other second year, 6 credit point units of study offered by the Faculty of Health, Engineering and Science.

**HES0007 DIRECTED STUDIES 2C**

**Campus** All campuses of the university where appropriate physical resources are available

**Prerequisites** Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled

**Co-requisites**

**Learning Outcomes** Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

**Content** A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other second year, 6 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

**Required Reading** The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, second year units of study offered by the Faculty of Health, Engineering and Science.

**Recommended Reading**

**Class Contact** Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

**Assessment** A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other second year, 6 credit point units of study offered by the Faculty of Health, Engineering and Science.
HES0009 DIRECTED STUDIES 3A
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites
Learning Outcomes Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other third year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 12 credit point, third year units of study offered by the Faculty of Health, Engineering and Science.

Recommended Reading
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other third year, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.

HES0010 DIRECTED STUDIES 3B
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites
Learning Outcomes Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other third year, 12 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 12 credit point, third year units of study offered by the Faculty of Health, Engineering and Science.

Recommended Reading
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other third year, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.

HES0011 DIRECTED STUDIES 3C
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites
Learning Outcomes Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other third year, 6 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, third year units of study offered by the Faculty of Health, Engineering and Science.

Recommended Reading
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other third year, 6 credit point units of study offered by the Faculty of Health, Engineering and Science.

HES0012 DIRECTED STUDIES 3D
Campus All campuses of the university where appropriate physical resources are available
Prerequisites Satisfactory completion of appropriate prerequisite studies as determined by the course coordinator in which a student, or group of similar students, seeking to undertake this unit is enrolled
Co-requisites
Learning Outcomes Upon completion of this unit of study students will be able:

- to identify the key elements in a previously unseen problem associated with the negotiated content area of this unit of study
- to locate the relevant underpinning theory in references available to them
- to use that support and appropriate mathematical and laboratory techniques, where necessary, to apply that information to the novel situation to reach a solution to the problem posed.

Content A selection of topics from the discipline areas encompassed by the Faculty of Health, Engineering and Science equivalent to a other third year, 6 credit point subjects in those discipline areas offered by the Faculty of Health, Engineering and Science.

Required Reading The content of this unit of study will vary according to the specific needs of the students undertaking it the required reading will depend on the content area of the studies undertaken. The required reading will, in general, be the same as or similar to that for other, 6 credit point, third year units of study offered by the Faculty of Health, Engineering and Science.

Recommended Reading
Class Contact Depending on the nature of the content areas to be covered it is anticipated that between 48 and 60 hours per semester of lecture/tutorial/seminar/laboratory sessions will be required.

Assessment A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for other third year, 6 credit point units of study offered by the Faculty of Health, Engineering and Science.
JCB0101 BIOLOGY 1
Campus Footscray Park
Prerequisites Nil.
Co-requisites Nil.
Learning Outcomes
Content Content Biological Organisation, Macromolecules and Functional Group Chemistry (structure and form), Functioning Cells and organisation, Microscopy, Animal vs Plant Cell Structure, Endomembrane System, Organelles, Mitochondria vs Chloroplasts, Mitosis/Meiosis, Membranes: Fluid Mosaic Model, Passive Movement Across Membranes, Active Movement Across Membranes, Endo/Exo cytosis, Cellular Energetics: Oxidative Respiration; Energy Releasing Pathways and energy metabolism. Cell signalling and cell junctions, Structure and Function of the animal body, tissue types, organs and organ system, regulating body temperature and homeostasis, protection support and movement, epithelial covering, skeletal system, Neural Signalling; Sensory reception, Basic brain functions and parts, muscle contraction.
Class Contact 86 hours over the semester accounts for a mixture of lectures, tutorials and laboratory classes.
Assessment
JCB0102 BIOLOGY 2
Campus Footscray Park
Prerequisites JCB0101 Biology 1 or equivalent
Co-requisites Nil.
Class Contact 86 hours over the semester accounts for a mixture of tutorials, laboratory classes and workshops. Additional 28 hours accounts for Extension Studies and their associated tutorials, problem based research projects and practicals.
Assessment Practical component is worth 15%. Extension Studies and associated exams and problem based enquiry/assignments are worth 18%. There will be three class tests worth 4% each. End of semester general exam (3 hours) is worth 55%. General exam and associated exams and problem based enquiry/assignments are worth 18%. There will be three class tests worth 4% each. End of semester general exam (3 hours) is worth 55%. General exam and practical component must be passed for successful completion of subject.

JCB0111 CHEMISTRY 1
Campus Footscray Park
Prerequisites Nil.
Co-requisites Nil.
Class Contact 96 hours over the general semester accounts for a mixture of tutorials, laboratory classes and workshops. Additional 28 hours accounts for Extension Studies and their associated tutorials, problem based research projects and practicals.
Assessment Practical component is worth 15%, Extension Studies and associated exams and problem based enquiry/assignments are worth 18%. There will be three class tests worth 4% each. End of semester general exam (3 hours) is worth 55%. General exam and practical component must be passed for successful completion of subject.

JCB0111 CHEMISTRY 2
Campus Footscray Park
Prerequisites JCB0111 Chemistry 1 or equivalent

Organic Chemistry and Mechanisms, Further Organic synthesis and reaction types. Carbohydrates, lipids and Protein Chemistry. Enzymatic chemical reactions focusing on enantioselectivity and optical rotation. Extension Studies is Further mechanisms, including, reactions at the alpha carbon, Electrophilic Aromatic substitution, Effects of substituents on reactivity, radical chemistry and reactions of the main functional groups.

Extension Studies in Analysis.-MS (Theory and application) -mass number identification and identification of main fragments (fragmentation mechanisms) -use in conjunction with NMR and IR -GC (Theory and application) – Operation and theory regarding retention times and separation. Quantitative applications. Column types, usage and instillation, understanding programming for analysis, detector systems (FID and ECD), Head space analysis and its application in forensics. GC/MS Hands on use and determining the effects of temp, pressure, length and type of column on retention times and base line separation. Column instillation and programming of ramping programs.


Class Contact 52 hours over the general semester accounts for a mixture of tutorials, laboratory classes and workshops. Additional 34 hours accounts for Extension Studies and their associated tutorials, problem based research projects and practicals.

Assessment Practical component is worth 16%. Extension Studies and associated exams and problem based enquiry/assignments are worth 20%. There will be three class tests worth 3% each. End of semester general exam (3 hours) is worth 55%. General exam and practical component must be passed for successful completion of subject.

JCM0101 INFORMATION TECHNOLOGY 1

Campus Footscray Park

Prerequisites Nil.

Content Journal Databases; Literature Searching and accessing using the Internet. Learning and utilising, WebCT, PowerPoint, Excel, Introduction to ChemDraw, DreamWeaver or alternative web development tool. Introductory Robotic Programming

Required Reading Required Reading

Recommended Reading Class Contact 52 hours over the semester accounts for a mixture of lectures, tutorials and computer classes.

Assessment A combination of assignments/presentation in each of the 4 areas chosen (25% each) contributes to overall mark which accumulates to 100%.

JCM0102 INFORMATION TECHNOLOGY 2

Campus Footscray Park

Prerequisites Nil.

Content Journal Databases; Literature Searching and accessing using the Internet. Learning and utilising, WebCT, PowerPoint, Excel, Introduction to ChemDraw, DreamWeaver or alternative web development tool. Introductory Robotic Programming

Required Reading Required Reading

Recommended Reading Class Contact 52 hours over the semester accounts for a mixture of lectures, tutorials and computer classes.

Assessment A combination of assignments/presentation in each of the 4 areas chosen (25% each) contributes to overall mark which accumulates to 100%.

JCM0112 MATHEMATICS 1

Campus Footscray Park

Prerequisites Nil.

Content

Required Reading

Recommended Reading

Class Contact 72 hours over the semester accounts for a mixture of lectures, tutorials and laboratory classes.

Assessment There will be three class tests worth 10% each. End of semester exam (3 hours) is worth 70%.

JCM0113 MATHEMATICS 2

Campus Footscray Park

Prerequisites JCM0112 Mathematics 1

Content

Co-requisites

Required Reading

Recommended Reading

Class Contact 72 hours over the semester accounts for a mixture of lectures, tutorials and laboratory classes.

Assessment There will be three class tests worth 10% each. End of semester exam (3 hours) is worth 70%.

JHLO110 ENGLISH LANGUAGE AND COMMUNICATIONS SKILLS

Campus Footscray Park

Prerequisites Nil.

Content Communications skills that encompass synthesis, summarising, referencing, report writing, literature review writing and essay writing are developed primarily but not exclusively through a scientific context, Presenting ideas and concepts in ways other than in the written and verbal form will be examined and developed as will aspects of science journalism and science media. Debating and communicating with and for a variety of audiences will be developed as will presentations skills for academic purposes. Students will be engaged in teaching and communicating science to Primary/Secondary school students via the Professor Science show, producing science resources for teachers, parents and students alike. Students will also be engaged in two of several possible projects that are problem based and/or community based that will further foster communication skills.
**JSP0102 PHYSICS 1**

**Campus** Footscray Park

**Prerequisites** Nil.

**Co-requisites**

**Content** Measurement: Significant Figures, Scientific Notation, Standards of measurement, Unit Conversion, Dimensional Analysis. One-Dimensional Kinematics Position, Distance and Displacement; Average Speed and Velocity; Acceleration; Motion with constant acceleration; Applications of the Equations of Motion; Free Falling Objects Vectors: Scalars; Vector Components: Adding and Subtracting vectors; Position, Displacement, Velocity, and Acceleration Vectors, Relative Motion. Two Dimensional Kinematics: Motions in Two Dimensions, Introduction to Projectile Motion, Launch angles. Newton’s Laws of Motion, Force and Mass; the three laws of motion; Forces in two dimensions. Frictional Forces, Strings and Springs; Translational Equilibrium, Circular Motion, Work and Kinetic Energy: Work done by constant force, Kinetic energy and work, work done by variable forces, power. Potential Energy and Conservative forces: potential Energy and work, conservation of mechanical energy: Linear momentum and collisions: Momentum and Newton’s second Law, impulse, conservation of linear momentum, inelastic collisions, elastic collisions, centre of mass. Introductory Statics. Rotational energy, Moment of Inertia, Torque (to be expanded upon alongside power in second semester, physics 2).

**Required Reading**

**Recommended Reading**


**Class Contact** 92 hours over the general semester accounts for a mixture of tutorials, laboratory classes and problem based work shops.

**Assessment** Three small class tests are worth 5% each. End of semester exam (3 hours) is worth 50%. Problem and Project Bases Projects and associated assignments and presentations are 35%. End of semester exam and all problem based projects must be passed to secure a pass in this subject.

**JSP0103 PHYSICS 2**

**Campus** Footscray Park

**Prerequisites** JSP0102 or equivalent

**Co-requisites**


Electricity: Electrostatic charge, electric field, electric potential, dc circuits, Ohm’s law, ac circuits, series and parallel capacitors, inductors. Continuation of statics. Fluids and Elasticity.

**Required Reading**

**Recommended Reading**


**Class Contact** 92 hours over the general semester accounts for a mixture of tutorials, laboratory classes and problem based work shops.

**Assessment** Three small class tests are worth 4% each. End of semester exam (3 hours) is worth 50%. Problem and Project Bases Projects and associated assignments and presentations are 38%. End of semester exam and all problem based projects must be passed to secure a pass in this subject.

**REP1000 DIRECTED STUDIES IN PHYSICS**

**Campus**

**Prerequisites** There are no prerequisites for this subject but Year 11 or equivalent physics background is preferred.

**Co-requisites** Nil.

**Learning Outcomes** To introduce students to the principles and techniques of physics and their applicability. It is principally designed for students who do not have a strong physics background or those who do not intend to major in physics or the allied technologies. Alternatively it can be used by students seeking a basic knowledge and understanding of physics with a view to examining whether they wish to study physics further. The detailed curriculum for an individual student, or a group of students with a common background, will depend on their prior studies in the area and the propose to which they wish to put the subject. The detailed content will, therefore, vary but will, in general be taught at a level equivalent to a standard first year physics subject in a technological degree.

**Content** A selection of topics from the following:

- Kinematics and Mechanics
- Thermodynamics
- Electricity and Magnetism
- Electronics
- Optics
- Wave Motion and Sound
- Quantum Physics
- Nuclear Physics

**Required Reading** Giancoli, D.C., Physics for Scientists and Engineers with Modern Physics 3rd Edition Prentics Hall or equivalent.

**Recommended Reading**

- Three hours per week for one semester or equivalent.

**Class Contact**

- Equivalent to 36 hours per semester of lecture/tutorial/demonstration and laboratory experiences per semester.

**Assessment** A series of regular assignments and tests as negotiated for each individual student or group of students with a similar background. the assessment regime will be equivalent to that for a first year physics subject in a technological degree.

**VDS8100 FOUNDATIONS OF KNOWLEDGE IN ENGINEERING & SCIENCE**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Nil.

**Content** The subject introduces students to concepts and procedures associated with sources of knowledge. In particular, it considers empiricism, which attempts to describe, explain and make predictions based on observations of the real world. It will deal with the collection of valid and appropriate data relevant to specific research questions, and will explore, at an advanced level, a range of qualitative and quantitative methodologies.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Examination(3 hour), 50%; Individual Research Project and presentation, 25%; Group Research Project and presentation, 25%.

**VDS8110 STRATEGY AND INNOVATION IN ENGINEERING & SCIENCE**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Nil.

**Content** Leading engineers and scientists use strategic decision making to find innovative solutions to current problems, to clarify conflicting priorities and evaluate new opportunities and to streamline and focus research activities. The subject is designed to examine
current issues associated with key facets of strategy and innovation, including the strategic decision making process, information technology support and approaches to innovation adoption.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Examination(3 hour), 50%; Individual Research Project and presentation, 25%; Group Research Project and presentation, 25%.

---

**VDS8120 PROJECT AND PERFORMANCE MANAGEMENT**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Nil.

Content Project and performance management combines the study of the planning, co-ordination and completion of complex projects with the scientific study and application of knowledge concerning the measurement of performance, its use in decision making and demonstrating accountability. The subject is designed to examine current issues associated with key facets of project and performance management and the role of the professional engineer and scientist in project and performance management. Focus will be on the legal, ethical and cost effectiveness of major technological research projects.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Examination(3 hour), 50%; Individual Research Project and presentation, 25%; Group Research Project and presentation, 25%.

---

**VDS8220 PROFESSIONAL STUDIES 1 IN ENGINEERING & SCIENCE**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** VDS8100 Foundations of Knowledge in Engineering & Science, VDS8110 Strategy and Innovation in Engineering & Science.

Content The subject introduces students to concepts and procedures associated with sources of knowledge in their field of expertise. In particular, it considers empiricism, which attempts to describe, explain and make predictions based on observations of the real world. It will deal with the collection of valid and appropriate data relevant to specific research questions in their field of expertise, and will explore, at an advanced level, a range of qualitative and quantitative methodologies.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Examination(3 hour), 50%; Individual Research Project and presentation, 25%; Group Research Project and presentation, 25%.

---

**VDS8210 PROFESSIONAL STUDIES 2 IN ENGINEERING & SCIENCE**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** VDS8100 Foundations of Knowledge in Engineering & Science.

Content The subject introduces students to concepts and procedures associated with sources of knowledge in their field of expertise. In particular, it considers empiricism, which attempts to describe, explain and make predictions based on observations of the real world. It will deal with the collection of valid and appropriate data relevant to specific research questions in their field of expertise, and will explore, at an advanced level, a range of qualitative and quantitative methodologies.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Examination(3 hour), 50%; Individual Research Project and presentation, 25%; Group Research Project and presentation, 25%.

---

**VDS8220 RESEARCH PROPOSAL PREPARATION AND WRITING**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** VDS8120 Project and Performance Management.

Content The subject introduces students to the issues involved in the production of research in technological fields. It will enhance knowledge, personal skills and competencies in conducting research in the broad engineering and science setting. Topics include: conceptualisation of research problems, theoretical formulation and contextualisation, problems and pitfalls in research development, analysis of past research, operationalisation of research problems to test hypotheses, measurement and levels of measurement, procedures for data collection, analysis and presentation, report writing and dissemination of research findings. It is an activity based subject that includes the appointment of a provisional supervisor and the production of a research proposal.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Three hours per week for one semester or equivalent.

**Assessment** Presentation of the research proposal at a peer review seminar 100%.

---

**VDS8300 ENGSCD DISSERTATION**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Completion of coursework component of EngScD.

Content The uncovering of new knowledge either by the discovery of new facts, the formulation of theories or the innovative reinterpretation of known data and established ideas. The final thesis is expected to be well written and to reveal an independence of thought and approach, a deep knowledge of the field of study and to have made a significant original contribution to knowledge.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Not applicable.

**Assessment** Dissertation(approximately 60,000 words), 100%.

---

**VDS8310 RESEARCH PROJECT A**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Completion of coursework component of EngScD.

Content Students under supervision are expected to analyse and report on data or information collected during the research phase, and to explore the implications of the study for theory and practice in some aspect of engineering and science.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Not applicable.

**Assessment** Research Project( approximately 30,000 words), 100%.

---

**VDS8315 RESEARCH PROJECT B**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Completion of coursework component of EngScD.

Content Students under supervision are expected to analyse and report on data or information collected during the research phase, and to explore the implications of the study for theory and practice in some aspect of engineering and science.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Not applicable.

**Assessment** Research Project( approximately 30,000 words), 100%.

---

**VDS8316 RESEARCH PROJECT C**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Completion of coursework component of EngScD.

Content Students under supervision are expected to analyse and report on data or information collected during the research phase, and to explore the implications of the study for theory and practice in some aspect of engineering and science.

**Required Reading** Dependent on students area of professional expertise.

**Recommended Reading** Nil.

**Class Contact** Not applicable.

**Assessment** Research Project( approximately 25,000 words), 100%.

---

**VDS8320 RESEARCH PAPER A**

**Campus** Footscray Park, Hong Kong, Beijing.

**Prerequisite(s)** Completion of coursework component of EngScD.
Content The paper will report on independently conducted research that demonstrates the students ability to clearly define and conclude an engineering and science problem.
Required Reading Dependent on students area of professional expertise.
Recommended Reading Nil.
Class Contact Not applicable.
Assessment Research Paper (approximately 15,000 words), 100%.

VDS8325 RESEARCH PAPER B
Campus Footscray Park, Hong Kong, Beijing.
Prerequisite(s) Completion of coursework component of EngScD.
Content The paper will report on independently conducted research that demonstrates the students ability to clearly define and conclude an engineering and science problem.
Required Reading Dependent on students area of professional expertise.
Recommended Reading Nil.
Class Contact Not applicable.
Assessment Research Paper (approximately 15,000 words), 100%.
Below are details of courses offered by the Packaging and Polymer Research Unit in 2008. This information is also available online on the University’s searchable courses database at www.vu.edu.au/courses.

**NOTE:** Courses available to International students are marked with the (I) symbol.

### MASTER OF ENGINEERING SCIENCE IN PACKAGING (COURSEWORK)

Off Shore Program  
Course Code: EMPK

#### Course Structure

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AUS$)</th>
<th>From 2005 (AUS$)</th>
<th>Full Fee (AUS$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPK6001</td>
<td>DEVELOPMENT OF PACKAGING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6002</td>
<td>MARKETING RESEARCH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6003</td>
<td>COSTING METHODOLOGIES AND IMPACTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6004</td>
<td>INVESTMENT/CAPITAL ANALYSIS AND BUDGETING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6005</td>
<td>QUALITY ASSURANCE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6006</td>
<td>OPERATIONAL STRATEGIES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6007</td>
<td>BUSINESS AND MARKETING STRATEGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6008</td>
<td>PACKAGING STRATEGY DEVELOPMENT AND IMPLEMENTATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$726</td>
<td>$908</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6009</td>
<td>DEVELOPMENT PROJECT/MINOR THESIS (OFFSHORE)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,904</td>
<td>$3,630</td>
<td>$6,336</td>
</tr>
</tbody>
</table>
VPM5000 INTERMODAL FREIGHT MARKETS – DYNAMICS AND STRUCTURE

Campus Werribee

Prerequisite(s) Nil

Content This subject is concerned with the way in which rapidly restructuring logistics and freight handling systems are impacting on the efficiency and effectiveness of service providers in integrated and intermodal freight markets. It focuses particularly on developing concepts, skills and techniques that will assist transport professionals and managers in intermodal freight handling firms not only to understand the economic and competitive drivers in the market place but also how to define their corporate ‘product’ and the way in which they do business. The subject meshes principles with practice and is developed within a framework or a detailed understanding of the Australian freight industry and its operations and practice, and it is informed also by extensive experience in Southeast Asian and Pacific Rim countries, in the United States and in Europe.


Class Contact Forty five hours of block mode teaching.

Assessment Case study and seminar presentation, 10%; Syndicate group project, 40%; Research report, 50%.

VPM5001 INTEGRATING INTERMODAL FREIGHT SYSTEMS

Campus Werribee

Prerequisite(s) VPM5000 Intermodal Freight Markets – Dynamics and Structure.

Content This subject focuses on managing firms in chain systems to achieve fully integrated, rather than highly segmented and atomistic chains. It is concerned with ways and means of trading off system efficiency and costs in such a way as to deliver maximum customer value under varying economic and policy scenarios. This unit will ad further to the students’ understanding of process mapping, the design of static and dynamic KPIs and dynamic modelling solutions for efficient chains.


Class Contact Teaching for each unit is over a five day block.

Assessment A seminar paper, 10%; Group syndicate work, 40%; Research report, 50%.

VPM5003 ADVANCED CHAIN SYSTEMS MANAGEMENT

Campus Werribee

Prerequisite(s) Nil

Content This subject focuses on managing firms in chain systems to achieve fully integrated, rather than highly segmented and atomistic chains. It is concerned with ways and means of trading off system efficiency and costs in such a way as to deliver maximum customer value under varying economic and policy scenarios. This unit will ad further to the students’ understanding of process mapping, the design of static and dynamic KPIs and dynamic modelling solutions for efficient chains.


Class Contact Forty five hours of block mode teaching.

Assessment Case study and seminar presentation, 10%; Syndicate group project, 40%; Research report, 50%.

VPM5004 FINANCIAL AND INVESTMENT PLANNING IN CHAIN SYSTEMS MANAGEMENT

Campus Werribee

Prerequisite(s) Nil

Content This subject builds on the concepts, skills and techniques developed in VPM5001 and VPM5003. In those subjects students examined the nature of the intermodal freight market and the role of the intermodal service provider in it; and the ways and means of managing to achieve seamless and efficient operations. In this subject the guiding questions are strategic ones and focus on positioning the firm for the future. More particularly, the subject develops a strong understanding of the notion of strategy and of an adequate conceptual framework within which to define strategies. It also outlines some quite specific attributes of strategy for intermodal firms and for the effective achievement of integrated freight networks. This subject draws heavily not only on the Australian freight industry but also on international experience.


Class Contact Forty five hours of block mode teaching.

Assessment Case study and seminar presentation, 10%; Syndicate group project, 40%; Research report, 50%.

VPM5006 DEFINING STRATEGIES FOR INTERMODAL FREIGHT SYSTEMS

Campus Werribee

Prerequisite(s) Nil

Content This subject builds on the concepts, skills and techniques developed in VPM5000 and VPM5001. In those subjects students examined the nature of the intermodal freight market and the role of the intermodal service provider in it; and the ways and means of managing to achieve seamless and efficient operations. In this subject the guiding questions are strategic ones and focus on positioning the firm for the future. More particularly, the subject develops a strong understanding of the notion of strategy and of an adequate conceptual framework within which to define strategies. It also outlines some quite specific attributes of strategy for intermodal firms and for the effective achievement of integrated freight networks. This subject draws heavily not only on the Australian freight industry but also on international experience.


Class Contact Forty five hours of block mode teaching.

Assessment Case study and seminar presentation, 10%; Syndicate group project, 40%; Research report, 50%.
VPM5005 STRATEGY, STRATEGIC OPTIONS AND BUSINESS SUCCESS IN CHAIN SYSTEMS

MANAGEMENT
Campus Werribee
Prerequisite(s) Nil
Content Rapid and continuing changes in complex intermodal and chain systems are resulting in significantly increased competitive pressures for third party service provider firms. What strategic options are available to stakeholder firms? And on what basis can the traditional 'transport provider' firms achieve sustained business success? This unit examines in depth the basis for business success and examines particularly the notions of market and supply chain power and draws on current research into real-world examples to provide guidance for stakeholder firms.
Required Reading Current available text book – student to be advised.
Class Contact Teaching for each unit is over a five day block.
Assessment A seminar paper, 10%; Group syndicate work, 40%; Research report, 50%.

VPM5006 BLK FRGHT MRKT AND SUPPLY CHAIN: DYN AND STR

VPM5007 MANAGING BULK SUPPLY CHAINS

VPM5008 DEFINING STRATEGIES FOR BULK FREIGHT SYS

VPM6000 MINOR THESIS

VPP8001 RESEARCH THESIS 1 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research/ResearchThesis1/FullTime

VPP8002 RESEARCH THESIS 2 FULL TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research/ResearchThesis2/FullTime

VPP8011 RESEARCH THESIS 1 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research/ResearchThesis1/PartTime

VPP8012 RESEARCH THESIS 2 PART TIME
This unit of study is part of a research degree program. Information on research topics for the Faculty of Health, Engineering and Science may be found on the faculty website at the following link: http://www.vu.edu.au/Faculties/HealthEngineeringandScience/Research/ResearchThesis2/PartTime
CONTINUING EDUCATION

Below are details of courses offered by the Continuing Education in 2008. This information is also available online on the University's searchable courses database at www.vu.edu.au/courses

NOTE: Courses available to international students are marked with the (I) symbol.

NON AWARD SHORT COURSE
PRE-REGISTRATION COURSE FOR OVERSEAS QUALIFIED AND RE-ENTRY NURSES
Course Code: HSCN

Course objectives
The objective of this course is: to prepare nurses registered outside Australia, and nurses who are seeking re-entry following a lapse of registration, to provide safe and comprehensive care to individuals, and groups in a variety of health care settings within Australia. This objective will be pursued in accordance with the ANMC or previously known as ANRAC competency standards as endorsed by the Australian Nursing and Midwifery Council (ANMC), 2005. Competencies will be achieved in an environment that fosters the individuals' personal, professional and intellectual growth. Clinical competence will be assessed by clinical teachers, who are committed to the needs of overseas & re-entry nurses. Successful completion of the course will lead to registration as a Division 1 Nurse with the Nurses Board of Victoria.

Course duration
This course will be offered over a 12 week period full time.

Admission requirements
Applicants must have the following:
• A letter from the Nurses Board of Victoria stating their eligibility to complete a Pre-registration course
• Demonstrate the English Language competency as set out by the Nurses Board of Victoria

Course structure
<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNN0001 THE AUSTRALIAN HEALTH CARE SYSTEM</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNN0002 NURSING WITHIN THE AUST HEALTH CARE SYS</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNN0003 PHARMACOLOGY</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNN0004 NURSING PRINCIPLES PROCESS AND PRACTICE</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNN0005 COMMUNICATION PROCESSES</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNN0006 CLINICAL PRACTICE</td>
<td>8</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

BRIDGING COURSE (GRADUATE ENTRY)
Course Code: HSGN

Degree preparation for Graduate Entry

Course Objectives
The aim of this non-award course is to prepare Graduate Entry applicants who have successfully completed a Degree for entry into the Bachelor of Nursing course.

Students who have successfully completed all of the Bridging course will proceed into the Bachelor of Nursing (Pre-Registration) course.

Course Duration
This course will be offered over a 4-week period during the Summer School.

Course Structure
<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HGG1113 INTRODUCTION TO NURSING STUDIES</td>
<td>12</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>APP1021 DEVELOPMENT PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RBM1536 HUMAN BIOSCIENCE B</td>
<td>12</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

BRIDGING COURSE (DIVISION 2 NURSES)
Course Code: HSVN

Degree preparation for Division 2 Nurses

Course Objectives
The aim of this non-award course is to prepare Division 2 Registered Nurses who have completed the 12-month TAFE course for entry into the Bachelor of Nursing course.

Students who have successfully completed the entire Bridging course will proceed into the Bachelor of Nursing (Pre-Registration) course.

Course Duration
This course will be offered over a 4-week period during the Summer School.

Admission Requirements
Current Registration as a Division 2 registered nurse (or eligibility for registration) with the Nurses Board of Victoria.

Course Structure
<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSD1114 INTRODUCTION TO HEALTH ASSESSMENT STUDIES</td>
<td>12</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>APP1021 DEVELOPMENT PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$510</td>
<td>$637</td>
</tr>
<tr>
<td>RBM1536 HUMAN BIOSCIENCE B</td>
<td>12</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

CERTIFICATE IN FOUNDATION STUDIES (ENGINEERING AND SCIENCE)
Course Code: JCFY

Philosophy and Aims of the Course
Many students are interested in science, health science, computing and/or engineering but have reservations about some of the fundamental study areas that define these disciplines. For various reasons, study areas such as chemistry, physics and mathematics are regarded as unapproachable. To remedy this situation, the Faculty of Health, Engineering and Science provides a year-long Foundation Studies program.
The Foundation Studies has been designed to:
- strengthen a student's understanding of these ‘difficult’ study areas;
- endeavour to develop a student's confidence in these study areas; and
- foster an intellectual vigour in tackling both future tertiary courses and areas of employment that are built upon these study areas.

Upon successful completion of the Foundation Studies program prerequisite subjects, students are guaranteed entry into courses operated by the Engineering and Science areas and access to a considerable number of courses run by the Health Science area within the Faculty. Access to Double degree programs run by the Faculty can also be accessed, however distinction marks across pre requisite subjects is required to access such programs.

Course Description
In general, the Foundation Studies program aims to provide an opportunity for students:
(i) who have not studied science and mathematics at Year 12 level;
(ii) who have studied basic science and mathematics at Year 12 level but did not achieve appropriate study scores to enable them to satisfy the entrance requirements for courses in the Faculty of Science, Engineering and Technology;
(iii) whose recent educational results have not been at the level of which they are capable of performing;
(iv) who are returning to study after some years away from formal education; or
(v) who wish to change direction in their education.

To make certain that students receive a concerted education that will fulfill the entry requirements of the tertiary system whilst taking into consideration the educational background of the students, the majority of the foundation study areas are streamed. Different streams can be undertaken for different subjects if required.

These streams; beginners, intermediate and advanced; offered by the Foundation Studies program reflect and accommodate the broad cross-section of the educational backgrounds of students.

Studies Streams

Beginners Stream
The beginners stream is designed for students that would like to pursue a tertiary qualification in a science, computing or an engineering discipline but:
- have had no prior contact with these disciplines; or
- have previously experienced learning difficulties in the study of these disciplines.

The beginners stream is specifically designed to introduce students to the fundamental principles that underpin the disciplines of science and engineering; to provide students with the ability to recognise, utilise and interpret these principles; to prepare students for their further tertiary education and most importantly foster a process of sustained learning and research.

Recognising the possible lack of confidence and/or trepidation brought about by the unfamiliarity of these study areas, students within this stream will be provided with extensive tuition in small classes over extended semesters. The beginners stream will commence in March and conclude in early February of the following year. Upon successful completion of prerequisite subject areas, students will gain guaranteed entry into one of the undergraduate courses offered by the Faculty of Science, Engineering and Technology.

Intermediate Stream
The intermediate level will run over two semesters, each of which will run for 16 weeks and will commence in March and conclude in December of the same year.

Advanced Stream
Students enrolled into the advanced stream of a particular subject will undertake an accelerated program. If all the topic areas within the study area(s) over Semester One are successfully completed a student may be eligible to enter a first-year undergraduate course or first-year year undergraduate core subjects within the Faculty in Semester Two.

Choice of Stream
Suitability of entry into any of these streams will be assessed upon completion of an entrance test and an interview. Students that have not previously attempted study areas that parallel those they wish to undertake at foundation level may opt not to sit for the test and enter the beginners stream.

Each stream will be timetabled so as to allow students upon consultation with Foundation Studies staff to move into an alternate stream over the duration of the course.

Study Areas Choices
The following study areas are offered as part of Foundation Studies: Biology, Chemistry, English Language and Communication Skills, IT, Mathematics for Scientists, Mathematics for Engineers and Physics.

Students will generally enrol in four subject areas. Fewer subjects may be undertaken. This will be determined by considering the students previous academic record, the results of the grading tests and via interview with the student. A choice of either a mathematics for scientists or engineers typically must be undertaken by all students.

Course Duration
The course is year long course although transfer to other courses is possible as a subject transfers following semester one. Semester One is undertaken over 17 weeks and Semester Two over 16 weeks. Beginners students may require to undertake a further session in early February of the following year for approximately seven weeks.

Course Location
All study areas will be taught at the University’s Footscray Park campus

Course Fee
Students who fit under the Federal Government Guidelines of disadvantage are HECS exempt with respect to the Foundation Studies program.

Application Procedures
Application to Foundation Studies is via direct application. Students will need to fill out an undergraduate application form available from Student Admissions, phone on (03) 9919 2286 or download from the website www.vu.edu.au/admissions. Alternatively the form can be accessed at www.vu.edu.au/foundationstudies.

Further information regarding the Foundation Studies program can be obtained from the Faculty Office.