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

The information contained in this handbook was current at 18 October 2006.
CONTENTS

How to use this handbook

2007 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) 9
- Bachelor of Engineering in Building Engineering (I) 11
- Bachelor of Engineering in Civil Engineering (I) 13
- Bachelor of Engineering in Mechanical Engineering (I) 15
- Bachelor of Technology in Building Surveying 16
- Graduate Diploma in Project Management (I) 18
- Master of Engineering in Mechanical Engineering (Coursework) (I) 19
- Master of Engineering (Project Management) (I) 19
- Graduate Certificate in Project Management (I) 20
- Subjects 22

School of Biomedical Sciences
- Bachelor of Science in Biomedical Sciences (I) 43
- Bachelor of Science in Ecology and Sustainability (I) 44
- Bachelor of Science in Nutritional Therapy 47
- Bachelor of Science in Occupational Health and Safety 48
- Bachelor of Science (Honours) Applied Biology (I) 49
- Bachelor of Science (Honours) in Biomedical Sciences (I) 49
- Subjects 50

School of Computer Science and Mathematics
- Bachelor of Science in Computer Science and Aviation (I) 75
- Bachelor of Science in Computational Financial Mathematics (I) 76
- Bachelor of Science in Computer and Mathematical Sciences (I) 77
- Bachelor of Science in Computer Science (I) 78
- Bachelor of Science in Internet Technologies and Applications (I) 80
- Bachelor of Science in Information Technology (I) 81
- Bachelor of Science in Logistics Analysis 82
- Graduate Diploma in Computer and Mathematical Sciences (I) 83
- Graduate Diploma in Computer Science (I) 84
- Graduate Diploma in Multimedia Information Networking (I) 84
- Graduate Diploma in Software Engineering (I) 85
- Bachelor of Science (Honours) in Computer and Mathematical Sciences (I) 86
- Bachelor of Science (Honours) in Computer Science (I) 86
- Master of Science in Computer and Mathematical Sciences 86
- Master of Science in Computer Science (I) 87
- Master of Science in Logistics Systems and Support 88
- Master of Science in Software Engineering (I) 89
- Master of Science (Research) 90
- Subjects 91

School of Electrical Engineering
- Bachelor of Engineering in Electrical and Electronic Engineering (I) 109
- Bachelor of Engineering Science in Electrical and Electronic Engineering (I) 110
- Bachelor of Engineering in Robotic Engineering (I) 111
- Graduate Diploma in Microelectronic Engineering (I) 112
- Graduate Diploma in Systems and Control Engineering (I) 113
- Graduate Diploma in Telecommunication Engineering (I) 114
- Bachelor of Science (Honours) in Computer Technology 114
- Master of Engineering Science in Computer & Microelectronic Engineering (Coursework) (I) 115
- Master of Engineering in Electrical and Electronic Engineering (I) 116
- Master of Engineering Science in Computer & Microelectronic Engineering/Master of Engineering Science in Computer and Microelectronic Engineering 117
- Master of Engineering in Microelectronic Engineering (I) 118
- Master of Engineering in Systems and Control Engineering (I) 119
- Master of Engineering in Science (Telecommunications Engineering) 119
- Master of Engineering in Telecommunication Engineering (I) 120
- Masters (by Research) 121
- Master of Engineering (Research) 121
- Graduate Certificate in Microelectronic Engineering (I) 122
- Graduate Certificate in Systems and Control Engineering (I) 123
- Graduate Certificate in Telecommunication Engineering (I) 123
- Bachelor of Science (Honours) – Physics (I) 124
- Subjects 125

School of Health Sciences
- Bachelor of Chinese Medicine (Acupuncture and Herbs) (I) 151
- Bachelor of Health Science Traditional Chinese Medicine (Acupuncture) 152
- Bachelor of Health Science – Chinese Medicine 152
- Bachelor of Health Science – Clinical Dermal Therapies (I) 153
Bachelor of Health Science (Chinese Medicine & Clinical Sciences) 154
Bachelor of Science – Clinical Sciences (I) 154
Bachelor of Health Science – Paramedic (ONE-year Conversion) 155
Bachelor of Health Science (Paramedic) 156
Bachelor of Health Science (Dermal Therapies) 157
Graduate Diploma in Dermal Therapies 158
Graduate Diploma in Emergency Management 158
Bachelor of Health Science (Honours) 158
Master of Health Science (by Minor Thesis) (I) 159
Master of Health Science – Osteopathy (I) 159
Master of Health Science (by Research) (I) 160
Bachelor of Health Science – Paramedic (three-year Pre-service) 161
Subjects 163

School of Molecular Sciences
Bachelor of Science in Biotechnology (I) 243
Bachelor of Applied Science in Chemistry (I) 243
Bachelor of Science in Medical, Forensic and Analytical Chemistry (I) 244
Bachelor of Science in Nutrition, Food and Health Science (I) 245
Graduate Diploma in Biotechnology 246
Graduate Diploma in Environmental Management (I) 247
Bachelor of Science (Honours) in Biology (Biotechnology) (I) 247
Bachelor of Science (Honours) in Chemical Sciences (I) 247
Bachelor of Science (Honours) in Nutrition and Food Science (I) 248
Master of Science – Biotechnology (Biotechnology and Bioinformatics Streams) (I) 248
Master of Science in Environmental Management (I) 249
Master of Science (Food Science) (I) 249
Subjects 251

School of Nursing and Midwifery
Bachelor of Nursing (Division 2 Entry) 271
Bachelor of Nursing (Graduate Entry) (I) 271
Bachelor of Nursing (Graduate Entry) Continuing Students Only (I) 272
Bachelor of Nursing (Pre-Registration) (Mental Health Major) 273
Bachelor of Midwifery – Continuing students only (I) 274
Bachelor of Midwifery 274
Bachelor of Nursing (Pre-Registration) (I) 275
Bachelor of Nursing – (Pre-Registration) Continuing students only 276
Bachelor of Nursing (Division 2 Entry) 277
Graduate Diploma in Substance Abuse Studies (I) 278
Bachelor of Nursing (Honours) 279
Bachelor of Health Science (Honours) – Nursing Continuing students only (I) 279
Master of Health Science – Diabetes Education and Management 280
Master of Nursing 281
Master of Nursing (Specialisations) 282
Doctor of Philosophy (I) 283
Master of Nursing (by Research) (I) 283
Non Award Short Course: Pre-registration Course for Overseas Qualified and Re-entry Nurses (I) 284
Bridging Course (Graduate Entry) (I) 284
Bridging Course (Division 2 Entry) (I) 284
Subjects 286

Centre for Environmental Safety and Risk Engineering
Graduate Diploma in Building Fire Safety and Risk Engineering (I) 341
Master of Engineering in Building Fire Safety and Risk Engineering (Coursework) (I) 341
Doctor of Philosophy 342
Graduate Certificate in Performance-Based Building and Fire Codes 342
Subjects 343

Centre for Telecommunications and Micro-Electronics
Subjects 347

Office Health, Engineering and Science
Bachelor of Arts/Bachelor of Science (I) 349
Bachelor of Business Electronic Commerce/Bachelor of Science (I) 349
Bachelor of Science/Bachelor of Laws (I) 349
Bachelor of Engineering/Bachelor of Arts (I) 349
Bachelor of Engineering/Bachelor of Business Electronic Commerce (I) 349
Bachelor of Engineering/Bachelor of Science (I) 350
Bachelor of Engineering/Bachelor of Laws 350
Masters Qualifying Program (I) 350
Master of Engineering and Science, and Doctor of Engineering Science 350
Certificate in Foundation Studies (Engineering and Science) (I) 351
Bachelor of Science/Bachelor of Psychology 352
Subjects 354

Packaging and Polymer Research Unit
Master of Engineering Science in Packaging (Coursework) 361
Subjects 362
HOW TO USE THIS HANDBOOK

The 2007 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 2007.

The courses and subject details are structured according to the faculty's individual schools, the Victoria Graduate School of Business and the Office of Business.

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 2007. 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.
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.

Course Philosophy
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 and Prerequisites
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:

Prerequisites Units 3 and 4
Mathematical Methods or Specialist Mathematics, with a study score of at least 22 in English

Middle Band Selection
Re-ranking based on study scores in the full range of year 12 student, with particular attention to pre-requisite studies and other science based studies.

Admission at Other Levels
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 competence.

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 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 1</th>
<th>Semester One</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>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</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>$712 $890</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>$712 $890</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>$500 $625</td>
<td>$1,430</td>
</tr>
<tr>
<td></td>
<td>REP1003 ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</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>$712 $890</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>$712 $890</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>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester One</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 From 2005</td>
<td>Full Fee</td>
</tr>
<tr>
<td></td>
<td>VAA2031 ARCHITECTURAL HISTORY &amp; DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</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>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2041 THERMOMECHANICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</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>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA2002 ELECTRICAL POWER SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC2022 BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC2042 HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### SERVICES STREAM

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Semester One</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>VAA3001 ELECTRICAL POWER SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3071 HVAC SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3091 BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3032 ENVIRONMENTALLY SUSTAINABLE DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3042 HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3072 HVAC SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### STRUCTURES STREAM

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Semester One</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>VAA4001 ARCHITECTURAL LIGHTING AND COMMUNICATIONS SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAA4071 HVAC SYSTEMS 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA4032 ENVIRONMENTALLY SUSTAINABLE DESIGN 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA4042 BUILDING FIRE SAFETY SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAA4092 BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### SERVICES STREAM

<table>
<thead>
<tr>
<th>Year 4</th>
<th>Semester One</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>VAA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAC4021 STRUCTURAL ENGINEERING ANALYSIS AND DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA4091 STRUCTURAL DYNAMICS 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAC4022 STRUCTURAL ENGINEERING ANALYSIS AND DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
Assessment
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 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 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.

Labour 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 and Prerequisites
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:
Prerequisites Units 3 and 4
Mathematical Methods or Specialist Mathematics, with a study score of at least 22 in English.

Middle Band Selection
Re-ranking based on study scores in the full range of year 12 student, with particular attention to pre-requisite studies and other science based studies.

Admission at Other Levels
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-time 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>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><strong>Semester One</strong></td>
<td></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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1051 ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REP1003 ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA1002 ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1022 SOLID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1032 INTRODUCTION TO DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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 One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA2031 ARCHITECTURAL HISTORY &amp; DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2021 SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2041 THERMFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2061 ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA2002 ELECTRICAL POWER SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC2042 HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC2022 BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>SERVICES STREAM</strong></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 One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA3001 ELECTRICAL POWER SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3071 HVAC SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3081 BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA3052 ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3042 HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3032 ENVIRONMENTALLY SUSTAINABLE DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3072 HVAC SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>STRUCTURES STREAM</strong></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 One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA3081 BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC3021 STRUCTURAL ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC3061 GEOMECHANICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA3042 HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC3062 GEOTECHNICAL ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC3092 STRUCTURAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAA3052 ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>SERVICES STREAM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VAA4071 HVAC SYSTEMS 3</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VAA4092 BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>STRUCTURES STREAM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAC4091 STRUCTURAL ENGINEERING DESIGN 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAA4082 BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VAA4092 BUILDING SYSTEMS DESIGN AND CONSTRUCTION</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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.

Course Duration

- 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:
  - TOEFL – a score of 550+, and a Test of Written English (TWE) score of 5+.
  - 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+.

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 through 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 an option 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 CIVIL ENGINEERING (I)

Course Code: EBCC

Civil Engineering is a broad-based discipline involving the planning, design, construction and management of a wide range of essential community infrastructure including, commercial and industrial buildings, water supply and wastewater systems, irrigation, drainage and flood protection systems, bridges, roads, highways and transportation systems, and port harbour and airport facilities.

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.

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 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 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 and Prerequisites

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.

- Prerequisites Units 3 and 4

  Mathematical Methods or Specialist Mathematics, with a study score of at least 22 in English

Middle Band Selection

Re-ranking based on study scores in the full range of year 12 student, with particular attention to pre-requisite studies and other science based studies.

Admission at Other Levels

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 1</th>
<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>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
</tr>
<tr>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$500</td>
<td>$625</td>
<td>$1,430</td>
<td></td>
</tr>
</tbody>
</table>

<p>| Semester Two | | | | | | | |
| REP1003 ENGINEERING PHYSICS 1C | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RMA1002 ENGINEERING MATHEMATICS 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VAN1022 SOLID MECHANICS 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VAN1032 INTRODUCTION TO DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |</p>
<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 (AUS)</th>
<th>From 2005 Fee (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td>VAC2071 SURVEYING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2041 THERMOFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td>VAC2022 BUILDING MATERIALS AND CONSTRUCTION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC2042 HYDRAULICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC2072 HIGHWAY ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td>VAC3021 STRUCTURAL ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC3031 CIVIL ENGINEERING DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC3041 HYDROLOGY AND WATER RESOURCES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC3061 GEOMECHANICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td>VAC3042 HYDRAULIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC3062 GEOTECHNICAL ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC3092 STRUCTURAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN3052 ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td>VAC4071 TRANSPORTATION ENGINEERING</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAC4081 ENVIRONMENTAL ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC4091 STRUCTURAL ENGINEERING DESIGN 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAN4011 ENGINEERING PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAN4051 ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td>VAC4032 CIVIL ENGINEERING DESIGN 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC4072 ENVIRONMENTAL PLANNING AND DESIGN</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAC4082 ENVIRONMENTAL ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAC4092 STRUCTURAL ENGINEERING DESIGN 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VAN4012 ENGINEERING PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Electives</td>
<td>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)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*Approved Electives from within the School of ACME</td>
<td>VAA2031 ARCHITECTURAL HISTORY &amp; DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3031 ENVIRONMENTALLY SUSTAINABLE DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3042 HYDRAULIC SERVICES SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VAA3081 BUILDING CONSTRUCTION AND LEGISLATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VA4051 BUILDING QUANTITIES AND COSTS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VA4092 BUILDING CONSTRUCTION AND LEGISLATION 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>VA4091 COMPUTATIONS AND ENGINEERING ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VEM2012 ELECTRICAL ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Electives from outside School of ACME</td>
<td>(Subject to approval by Course Co-ordinator)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessment</td>
<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. 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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree with Honours</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industrial Experience</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Recognition</td>
<td>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.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

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 and Prerequisites
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.

Prerequisites Units 3 and 4
Mathematical Methods or Specialist Mathematics, with a study score of at least 22 in English

Middle Band Selection
Re-ranking based on study scores in the full range of year 12 students, with particular attention to pre-requisite studies and other science based studies.

Admission at Other Levels
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
• OJFL – 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</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>RMA1001 ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>REP1001 ENGINEERING PHYSICS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1051 ENGINEERING PROFESSION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>VAN1011 EXPERIMENTATION AND COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RMA1002 ENGINEERING MATHEMATICS 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>REP1003 ENGINEERING PHYSICS 1C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1032 INTRODUCTION TO DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN1022 SOLID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAM2011 COMPUTATIONS AND ENGINEERING ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2021 SOLID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2061 ENGINEERING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2041 THERMOFLUIDS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEM2012 ELECTRICAL ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2062 MATERIALS AND MANUFACTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2032 ENGINEERING DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN2042 THERMODYNAMICS AND FLUID MECHANICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAM3021 STRESS ANALYSIS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAM3071 DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAM3031 MECHANICAL ENGINEERING DESIGN 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAM3041 THERMODYNAMICS AND FLUID MECHANICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VAM3012 SIGNAL ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAM3022 STRESS ANALYSIS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAM3072 MECHANICAL VIBRATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VAN3052 ENGINEERING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
Course should be able to demonstrate valuable capabilities as follows: Be effective problem solvers in a range of settings including professional
Graduates of this course will have had the opportunity to experience learning in a dual sector environment that assists them in both finding
ability to adapt to the changing needs of industry, commerce and community, as well as the ability to take a leadership role in promoting institutional
building surveying consultancies, building contractors, manufacturers, statutory authorities, local government and state government departments; an
building surveying services to clients and/or employers, whether as a sole practitioner or within larger organizations including engineering and
installations, inspection and maintenance, and facility management; an ability to work independently, ethically and professionally in the provision of
practitioners, authorities, manufacturers, tradespeople and other significant stakeholders; specific skills that will lead to employment in the fields of
used to manage and operate a building surveying business, within either the private sector or public sector, and meet the needs of developers,
is influenced by a variety of political, social, economic, cultural, industrial and technological factors; a broad range of vocational skills that can be

Course Objectives

Assessment
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 through levels 1 to 3 and have
not been granted more than one stage completion 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 mechanical 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
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.

BACHELOR OF TECHNOLOGY IN BUILDING SURVEYING
Course Code: EBSB
This course provides a tertiary degree in Building Surveying with exit points at Diploma of Building Surveying qualification level and Advanced Diploma of Building Surveying qualification level.
The first three years of the course (at Sunshine Campus ) focus on building technology and statutory control of building. This involves completion of twenty-four units of competency learning over two years leading to the Diploma of Building Surveying, followed by completion of an additional nineteen units of competency learning leading to the Advanced Diploma of Building Surveying. Concurrent studies (at Footscray Park Campus ) provide students with basic professional literacy and numeracy. Subjects prescribed for this purpose are VAN1051 Engineering Profession, JCM0110 Mathematics and RMA1001 Engineering Mathematics 1A.
In the final (fourth) year of the course (spread over Footscray Park and Werribee Campuses) the focus is on professional practice primarily in the areas of building design, building approval and building construction.

Graduates of this course will have completed studies equivalent to the Graduate Certificate in Performance-Based Building and Fire Codes (Course Code: ETQB) at Werribee Campus.

Course Objectives
Course objectives are to produce graduates who have acquired a strong technological base for professional practice in the areas of Building Surveying and exhibit valuable graduate attributes as follows: A sound knowledge of the structure and practices of Australian building (design and construction) regulatory systems; an understanding and appreciation of building design and approval, and building construction and inspection, as it is influenced by a variety of political, social, economic, cultural, industrial and technological factors; a broad range of vocational skills that can be used to manage and operate a building surveying business, within either the private sector or public sector, and meet the needs of developers, practitioners, authorities, manufacturers, tradespeople and other significant stakeholders; specific skills that will lead to employment in the fields of design consultancy, certification, approvals and permits, construction management, detailed hydraulic, electrical and mechanical services installations, inspection and supervision, and facility management; an ability to work independently, ethically and professionally in the provision of building surveying services to clients and/or employers, whether as a sole practitioner or within larger organizations including engineering and building surveying consultancies, building contractors, manufacturers, statutory authorities, local government and state government departments; an ability to adapt to the changing needs of industry, commerce and community, as well as the ability to take a leadership role in promoting institutional and social change with social justice initiatives.
Graduates of this course will have the opportunity to experience learning in a dual sector environment that assists them in both finding employment and becoming lifelong learners in the broader context. Successful graduates of the Bachelor of Technology in Building Surveying course should be able to demonstrate valuable capabilities as follows: Be effective problem solvers in a range of settings including professional practice; Locate, evaluate, manage and use information effectively, including critical thinking, information technology skills, information gathering
skills, and carrying out statistical and other calculations; Communicate effectively in oral and written form as a professional and as a citizen; Work as a professional both autonomously and collaboratively.

**Admission at Other Levels**
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 Advanced Diploma at an Institute of TAFE or in the case of a mature-age applicant.

**Course Duration**
Four years full-time. Part-time enrolment may also be approved.

**Course Structure**

### Year 1 and Year 2

#### Diploma of Building Surveying

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Course Title</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCGSV5001A</td>
<td>Assess the construction of domestic scale buildings</td>
<td>100</td>
</tr>
<tr>
<td>BCGSV5002A</td>
<td>Evaluate materials for construction of domestic scale buildings</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV5003A</td>
<td>Produce working drawings for residential buildings</td>
<td>90</td>
</tr>
<tr>
<td>BCGSV5004A</td>
<td>Apply legislation to urban development and building controls</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5005A</td>
<td>Apply footing and geomechanical design principles for domestic scale buildings</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5006A</td>
<td>Assess construction faults in residential buildings</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5007A</td>
<td>Undertake site surveys and set out procedures to building projects</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV5008A</td>
<td>Apply building control legislation to building surveying</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5009A</td>
<td>Assess the impact of fire on building materials</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5010A</td>
<td>Interact with clients in a regulated environment</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5011A</td>
<td>Apply building codes and standards to residential buildings</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5012A</td>
<td>Assess timber framed designs for one and two storey buildings</td>
<td>38</td>
</tr>
<tr>
<td>BCGSV5013A</td>
<td>Apply principles of energy efficient design to buildings</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5014A</td>
<td>Apply building surveying procedures to residential buildings</td>
<td>36</td>
</tr>
<tr>
<td>BCGSV5015A</td>
<td>Assess structural requirements for domestic scale buildings</td>
<td>72</td>
</tr>
<tr>
<td>BSBADM506A</td>
<td>Manage business document design and development</td>
<td>60</td>
</tr>
<tr>
<td>BSBCMN406A</td>
<td>Maintain business technology</td>
<td>40</td>
</tr>
<tr>
<td>CHCCOM3A</td>
<td>Utilise specialist communication skills</td>
<td>50</td>
</tr>
<tr>
<td>CHCCOM4A</td>
<td>Develop, implement and promote effective communication techniques</td>
<td>75</td>
</tr>
<tr>
<td>ICAITU128A</td>
<td>Operate a personal computer</td>
<td>30</td>
</tr>
<tr>
<td>ICAITU129A</td>
<td>Operate a word processing application</td>
<td>30</td>
</tr>
<tr>
<td>ICAITU130A</td>
<td>Operate a spreadsheet application</td>
<td>30</td>
</tr>
<tr>
<td>ICAITU131A</td>
<td>Operate a database application</td>
<td>30</td>
</tr>
<tr>
<td>ICAITU133A</td>
<td>Send and retrieve information over the internet using browsers and email</td>
<td>25</td>
</tr>
</tbody>
</table>

**Subtotal for Diploma**

<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>1136</td>
<td>12</td>
<td>0.1250</td>
<td>500</td>
<td>625</td>
<td>1,430</td>
</tr>
</tbody>
</table>

### Year 3

#### Advanced Diploma of Building Surveying

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Course Title</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCGSV6001A</td>
<td>Assess the construction of buildings up to 3 storey</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV6002A</td>
<td>Produce working drawings for buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6003A</td>
<td>Assess construction faults in buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6004A</td>
<td>Apply footings and geomechanical design principles to buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6005A</td>
<td>Evaluate services layout and connection methods for residential and commercial buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6006A</td>
<td>Evaluate the use of concrete for residential and commercial buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6007A</td>
<td>Assess structural requirements for buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6008A</td>
<td>Apply building codes and standards to buildings up to 3 storey</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV6009A</td>
<td>Implement performance based codes and risk management principles for buildings up to 3 storey</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV6010A</td>
<td>Apply fire technology to buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6011A</td>
<td>Apply legal procedures to building surveying</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6012A</td>
<td>Facilitate community development consultation</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6013A</td>
<td>Co-ordinate asset refurbishment</td>
<td>72</td>
</tr>
<tr>
<td>BCGSV6014A</td>
<td>Manage and plan land use</td>
<td>40</td>
</tr>
<tr>
<td>BCGSV6015A</td>
<td>Analyse and present building surveying research information</td>
<td>90</td>
</tr>
<tr>
<td>BCGSV6016A</td>
<td>Apply building surveying procedures to buildings up to 3 storey</td>
<td>40</td>
</tr>
<tr>
<td>BSX154L606</td>
<td>Manage human resources</td>
<td>40</td>
</tr>
<tr>
<td>LGAPLEM502A</td>
<td>Apply ecologically sustainable development principles to the built environment</td>
<td>60</td>
</tr>
<tr>
<td>LMFFT4010A</td>
<td>Identify and calculate production costs</td>
<td>36</td>
</tr>
</tbody>
</table>

**Subtotal for Advanced Diploma**

<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>1004</td>
<td>12</td>
<td>0.1250</td>
<td>712</td>
<td>890</td>
<td>1,584</td>
</tr>
</tbody>
</table>

### Year 4

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

#### Semester One

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Course Title</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>QB5611</td>
<td>RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
</tr>
<tr>
<td>VQB5621</td>
<td>FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
</tr>
<tr>
<td>VAN4011</td>
<td>ENGINEERING PROJECT 1</td>
<td>12</td>
</tr>
<tr>
<td>VAN4051</td>
<td>ENGINEERING PROJECT MANAGEMENT</td>
<td>12</td>
</tr>
</tbody>
</table>

**Subtotal 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>48 186</td>
<td>12</td>
<td>0.1250</td>
<td>712</td>
<td>890</td>
<td>1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subject Code</th>
<th>Course Title</th>
<th>Credit Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMA1001</td>
<td>ENGINEERING MATHEMATICS 1A</td>
<td>12</td>
</tr>
</tbody>
</table>

**Total for Year 3 N/A 1064**

17
The course is designed specifically to meet the needs of current or potential managers in the building construction and related industries. It will place the management of the project firmly within the wider environment.

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 these will be required prior to enrolment.

The Graduate Diploma in Project Management at Victoria University was the first such course set up in Victoria, and only the second in Australia. For the competency learning components of the course, assessment is conducted in accordance with the Assessment Guidelines for the Building and Construction Industry. For the other subjects that make up the degree, the various assessment stipulations specific to individual subjects are as set out in Subject Details in the Faculty of Health, Engineering and Science Handbook.

Professional Recognition
The course satisfies the academic requirements of Building Surveyor practitioner registration boards such as the Building Practitioners Board of Victoria where legislation makes reference to a degree in Building Surveying from a university within the meaning of the Tertiary Education Act 1993. This ensures that graduates who are interested in registering and practising as a professional Building Surveyor have the necessary formal educational qualifications.

GRADUATE DIPLOMA IN PROJECT MANAGEMENT (I)

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 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.

<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 (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre 2005 (AUS)</td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
</tbody>
</table>

Compulsory core subjects

<table>
<thead>
<tr>
<th>Subject</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>BMO5589 INDUSTRIAL RELATIONS AND THE BUILDING INDUSTRY (SERVICE UNIT OF STUDY)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Elective subjects

Four electives are selected from the following:

<table>
<thead>
<tr>
<th>Subject</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>VCP5705 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5715 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5736 FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>VCP5800 TELECOMMUNICATIONS PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

plus approved subjects currently available at Victoria University, Footscray Park Campus. These approved subjects may include:

Computer Science Semesters to be advised

<table>
<thead>
<tr>
<th>Subject</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>RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5801 INTRODUCTION TO COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Decision Support Science

<table>
<thead>
<tr>
<th>Subject</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>RCM5602 QUALITY MANAGEMENT AND STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

The availability of electives from other departments depends on staff resources and enrolments.

Assessment
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.
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 Semester 1 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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMC5672 NUMERICAL TECHNIQUES AND PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMW5682 MANUFACTURING MATERIALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>VMC5771 COMPUTER AIDED ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMF5881 ADVANCED FLUID-THERMO DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMW5771 RESEARCH TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VMV5782 COMPUTATIONAL DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMT5882 COMPUTATIONAL FLUID DYNAMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VME5782 SPECIALIST ELECTIVE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VMP5872 RESEARCH PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Assessment
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 ENGINEERING (PROJECT MANAGEMENT) (I)

Course Code: EMFM

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 180 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 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>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>BMO5537 BUSINESS LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>BMO5513 LAW OF EMPLOYMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BAO5735 ADVANCED FORECASTING, PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BLO6502 LAW FOR MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BMO5537 TOPICS IN EMPLOYEE RELATIONS MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5602 QUALITY MANAGEMENT AND STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5801 INTRODUCTION TO COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5610 PROJECT MANAGEMENT PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5620 PROJECT MANAGEMENT AND CONTRACTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5670 PROJECT MANAGEMENT AND INFORMATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5736 FACILITY LIFE CYCLE COSTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>VCP5890 TELECOMMUNICATIONS PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Assessment:
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.

GRADUATE CERTIFICATE IN PROJECT MANAGEMENT (I)

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>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>Project Management subjects</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>VCP5600 PROJECT MANAGEMENT FUNDAMENTALS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>VCP5620 PROJECT MANAGEMENT AND CONTRACTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5716 PROJECT DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5726 PROJECT PROCUREMENT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VCP5745 BUILDING REGULATORY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>VCP5780 TELECOMMUNICATIONS PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>plus approved subjects currently available at Victoria University, FootscRAY Park Campus, such as:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer Science (semesters to be advised)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM5404 FINANCIAL DECISION SUPPORT SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5801 INTRODUCTION TO COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Decision Support Science</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM5602 QUALITY MANAGEMENT AND STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Business Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BA05735 ADVANCED FORECASTING, PLANNING AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO5513 LAW OF EMPLOYMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO5537 BUSINESS LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>BLO6502 LAW FOR MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Industrial Relations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

The availability of electives from other areas/schools depends on staff resources and enrolments.
SUBJECTS
Below are subject details for courses offered by the School of Architectural, Civil and Mechanical Engineering in 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, or Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

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


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 (EC + PD) + 3hr exam = 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


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.
Content This subject aims to provide students with an overview of the main issues involved in the integrated design of buildings aiming to achieve sustainable development. Although the subject is self-contained, it is the first component of the suite Engineering Architectural Engineering Design 1, 2 and 3. 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, rainwater and utilisation of the organic matter.

Required Reading Daniels, K., 1997. The Technology of Ecological Building, Birkhauser; Notes provided by the lecturer.

Class Contact Two hrs of lectures and three hrs of tutorials per week
Assessment Assignment 1: based on weeks 1-6 (Up to 1500 words – individual report), 35%; Assignment 2: based on weeks 7-11 (Up to 3500 words – group report), 35%; two hour examination, 30%.

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

Required Reading Oesterle, E. et al., 2001, Double-skin Facades, Prestel Publishing; Thorpe, GR., 2005, Lecture notes on numerical heat transfer in building-elements; Notes provided by the lecturer.

Class Contact two hrs of lectures and three hrs of tutorials per week
Assessment Assignment 1: based on weeks 1-4, 15%; Assignment 2: based on weeks 1-7, 15%; Assignment 3: based on weeks 8-9, 20%; Assignment 4: based on weeks 10-12, 20%; two hour examination, 30%. The assessment tasks will demonstrate that students are capable of presenting sustained intellectual arguments. Some of the arguments take the form of narratives, whilst some of the arguments will be intensely mathematical, but illustrative of the narratives. It is expected
that the written work will be based on rational argument and it will not be based on dubious ways of knowing and epistemologies. It is anticipated that students will be able to celebrate the achievements of scientific method over primitive myths. Each assessment task will be 500–1000 words.

VAA3042 HYDRAULIC SERVICES SYSTEMS
Campus Footscray Park
Prerequisite(s) VAC 2042 Hydraulics
Content 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 drainages, stormwater systems and sewerage 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 sewage treatment and the treatment processes.
Required Reading Class Notes; AS 3500 (2003), National Plumbing and Drainage Code Parts 0-4.
Class Contact three hrs of lectures and two hrs of tutorials/ laboratory per week.
Assessment Assignment 1: Water supply design and report for commercial building (Calculations, sketches, max word limit of 2000 words), 15%; Assignment 2: Water supply design and report for previous building (Calculations, sketches, max word limit of 2000 words), 15%; Assignment 3: Report on particular aspects of a site visit (Max word of 1500),10%; three hour examination, 60%.

VAA3071 HVAC SYSTEMS 1
Campus Footscray Park
Prerequisite(s) VAC 2041 Thermofluids, VAC2042 Hydraulics.
Class Contact Two hrs of lectures and three hrs of tutorials per week.
Assessment Assignment 1: based on theoretical aspects of building (sketches, max word limit of 3000), 20%; Assignment 2: based on practical aspects of building (sketches, max word limit of 3000), 20%; Class Tutorial Exercises (sketches, max word limit of 1500), 10%; three hour Examination, 50%.

VAA4001 ARCHITECTURAL LIGHTING AND COMMUNICATIONS SYSTEMS
Campus Footscray Park
Prerequisite(s) VAA 3001 Electrical Power Systems 2.

**Required Reading**

**Recommended Reading**

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

**Assessment**
Architectural Lighting (AL) – three hours per week:
  - Tutorial work assessment (5 submissions @ 2%), 10%; Project 1 – Assessment of existing lighting system (2000 words equivalence), 20%; Project 2 – Design of a lighting system, 30%; Communications Systems (CS) – two hours per week: Project 1 (Individual report 2000 words equivalence), 15%; Project 2 (Individual report 3000 words equivalence), 25%; Final three hour examination, 50%; Weighting, 50% of ( AL + CS ) + 3hr exam = subject assessment.

**VAA4042 ENVIRONMENTALLY SUSTAINABLE DESIGN 3**
Campus Footscray Park
**Prerequisite(s)**

**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.

**Recommended Reading**

**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.

**Content**

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

**Recommended Reading**

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

**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%.

**VAA4051 BUILDING QUANTITIES AND COSTS**
Campus Footscray Park
**Prerequisite(s)** VAN3052 Engineering Management.

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Two hrs of lectures and 1hr of tutorial and computer lab session per week.

**Assessment**
Assignment 1: based on weeks 1-5 (calculations, sketches, computer applications, max word limit of 1000), 15%; Assignment 2: based on weeks 6-11 (calculations, sketches, computer applications, max word limit of 1000), 15%; Class Tutorial Exercises Based on Weeks 1-11 (calculations, sketches, computer applications, max word limit of 500),10%; three hour examination, 60%.

**VAA4071 HVAC SYSTEMS 3**
Campus Footscray Park
**Prerequisite(s)** VAA3072 HVAC Systems 2.

**Content**

**Required Reading**

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

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 the principles of constructability/buildability and co-ordination aspects of building services, as well as to compliance with building codes and regulations. Issues involving integrated building design to minimise construction costs and achieve sustainable construction methods are also introduced.

Required Reading
Notes and handouts provided by the lecturers.

Recommended Reading

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

Assessment
Assignment 1 (5000 words group assignment), 65%; two hour examination, 35%.

VAC2022 BUILDING MATERIALS AND CONSTRUCTION
Campus Footscray Park
Prerequisites Nil

Learning Outcomes
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 types, properties and applications of plant and equipment which could typically be used in a variety of civil and building engineering 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, and to effectively communicate ideas, issues, investigations and results by a variety of methods.

Content
This subject introduces the basic building materials and the typical construction equipment, plant and techniques used in civil/building engineering construction work. The basic building materials include aggregates (e.g. sand, gravel, crushed rock and stone), concrete, metal (e.g. iron and steel), timber and other materials such as masonry, aluminium, glass, plastic and boards. The types, properties and applications of these materials will be examined. This subject also aims to give students an understanding of the principles and applications of typical construction plants and equipment covering excavating, hoisting, transporting and mixing equipment. Other equipment such as pile drivers, scaffolding and falsework, pumping and dewatering plant are presented as well. To give students an overall idea of construction work and process, the building development process, construction site establishment and works, construction techniques using typical construction plant/equipment, construction site OH&S will be introduced as well.

Recommended Reading
Notes and handouts provided by the lecturers.

Recommended Reading

Class Contact
Three hour lecture plus two hour tutorial per week, totally 60 hours per semester.

VAC 2022 BUILDING MATERIALS AND CONSTRUCTION
Campus Footscray Park
Prerequisites Nil Learning Outcomes 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 types, properties and applications of plant and equipment which could typically be used in a variety of civil and building engineering 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, and to effectively communicate ideas, issues, investigations and results by a variety of methods.

Content
This subject introduces the basic building materials and the typical construction equipment, plant and techniques used in civil/building engineering construction work. The basic building materials include aggregates (e.g. sand, gravel, crushed rock and stone), concrete, metal (e.g. iron and steel), timber and other materials such as masonry, aluminium, glass, plastic and boards. The types, properties and applications of these materials will be examined. This subject also aims to give students an understanding of the principles and applications of typical construction plants and equipment covering excavating, hoisting, transporting and mixing equipment. Other equipment such as pile drivers, scaffolding and falsework, pumping and dewatering plant are presented as well. To give students an overall idea of construction work and process, the building development process, construction site establishment and works, construction techniques using typical construction plant/equipment, construction site OH&S will be introduced as well.

Recommended Reading
Notes and handouts provided by the lecturers.

Recommended Reading

Class Contact
Three hour lecture plus two hour tutorial per week, totally 60 hours per semester.

VAC 2022 BUILDING MATERIALS AND CONSTRUCTION
Campus Footscray Park
Prerequisites Nil Learning Outcomes 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 types, properties and applications of plant and equipment which could typically be used in a variety of civil and building engineering 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, and to effectively communicate ideas, issues, investigations and results by a variety of methods.

Content
This subject introduces the basic building materials and the typical construction equipment, plant and techniques used in civil/building engineering construction work. The basic building materials include aggregates (e.g. sand, gravel, crushed rock and stone), concrete, metal (e.g. iron and steel), timber and other materials such as masonry, aluminium, glass, plastic and boards. The types, properties and applications of these materials will be examined. This subject also aims to give students an understanding of the principles and applications of typical construction plants and equipment covering excavating, hoisting, transporting and mixing equipment. Other equipment such as pile drivers, scaffolding and falsework, pumping and dewatering plant are presented as well. To give students an overall idea of construction work and process, the building development process, construction site establishment and works, construction techniques using typical construction plant/equipment, construction site OH&S will be introduced as well.

Recommended Reading
Notes and handouts provided by the lecturers.

Recommended Reading

Class Contact
Three hour lecture plus two hour tutorial per week, totally 60 hours per semester.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Assessment
One group assignment (30%); two individual assignments (10%+10%); final examination (50%).

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 water surface profiles. Introduction to unsteady flow conditions.
Required Reading
Recommended Reading
Class Contact
three hrs of lectures and two hrs of tutorials/ laboratory 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 visit in week 9 (Report, photographs, sketches, max word limit of 1500), 10%: Tests (5 x 1 hr 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, Victoria Land Title System.
Required Reading
Class notes.
Recommended Reading
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: Transfering 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 leveling 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 super-elevation, determination of sight distance; vertical alignment including grades and vertical curves. Pavement design methods for both flexible and rigid pavements. Introduction to road drainage systems, surface and subsurface drainage. Road maintenance issues and programs.
Required Reading
Austroads (1993), Rural Road Design 7th edn; Class Notes.
Recommended Reading
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) VAN2021 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.
Required Reading
Recommended Reading
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.
Content
Students will perform five designs of 12 hours each drawn from the areas of drainage, hydraulics, structures and highway 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.
Required 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.

VAC3041 HYDROLOGY AND WATER RESOURCES
Campus Footscray Park
Prerequisite(s) VAC2042 Hydraulics.
Content
VAC3042 HYDRAULIC ENGINEERING
Campus Footscray Park
Prerequisite(s) VAC 2042 Hydraulics.

Content 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


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

Assessment Assignment 1: Report based on material covered in weeks 1-7 (Calculations, sketches, max word limit 1500), 12%; Assignment 2: Use of application software REALM (Calculations, sketches, max word limit of 1000), 18%; three hour examination, 50%.

VAC3061 GEOMECHANICS
Campus Footscray Park
Prerequisite(s) VAN 1022 Solid Mechanics 1


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

Assessment Assignment 1: Report based on field geological/soils investigation (calculations, sketches, max word limit 2000), 15%; Assignment 2: Lab/practical work report on soil testing (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%.

VAC3002 GEOTECHNICAL ENGINEERING
Campus Footscray Park
Prerequisite(s) VAC 2061 Geomechanics


Required Reading Smith, I. (2006 Elements of Soil Mechanics, 8th edn, Blackwell Science; Class Notes.


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 problem (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


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

Assessment Assignment 1: Report based on material covered in weeks 1-7 (Calculations, sketches, max word limit 2000), 20%; Test (calculations, sketches, max word limit of 2000), 20%; three hour examination, 60%.
VAC4021 STRUCTURAL ENGINEERING ANALYSIS AND DESIGN 1

Campus: Footscray Park
Prerequisite: VAC302 Structural Design


Assessment: 2 hour examination, 60%; Subject final result derived from weightings = (Calculations, sketches, max word limit of 1500), 40%; one hour examination, 40%.

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.

Assessment: 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.

VAC4071 TRANSPORTATION ENGINEERING

Campus: Footscray Park
Prerequisite(s): Nil

Content: Demand for transport and the significance of transport and freight movement to the economy; road safety issues; transport planning techniques including trip generation, trip distribution, mode split and trip assignment models. Traffic engineering aspects – flow theory; road capacity; headways; gaps; speed analysis. Intersection analysis; use of SIDRA program to aid design and analysis of signalised intersections; traffic survey methods and analysis; local area traffic management studies; travel demand management.


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

Assessment: Assignment 1: Site Investigations Report (2000 words), 15%; Assignment 2: Trip generation and trip distribution (Calculations & 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 sub-divisions and appropriate street designs.

Recommended 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) VAC 2042 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: Site visit report (max word limit of 1000), 10%; 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 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%.

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

VAC4091 STRUCTURAL ENGINEERING DESIGN 1
Campus Footscray Park
Prerequisite(s) VAC 2042 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) VAC 4091 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%.

VAM2042 THERMODYNAMICS AND FLUID MECHANICS 1
Campus Footscray Park
Prerequisite(s) VAN2041 Thermofluids.

**Required Reading** Comprehensive class, laboratory and activity notes. 


**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%; 

**VAM2062 MATERIALS AND MANUFACTURE** 

**Campus** Footscray Park 

**Prerequisite(s)** VAN2061 Engineering Materials. 


**Class Contact** four hrs of lectures/common tutorials/discussion/field trip and one hr of tutorials and laboratory per week. 

**Assessment** Test 1 in week 5, 10%; Test 2 in week 11, 10%; three Lab Reports. Students will require to achieve a minimum of 40% in these assessment tasks to successfully complete the subject. (Maximum of 5000 words including calculations), 25%; three hour examination, 55%. 

**VAM3022 STRESS ANALYSIS 2** 

**Campus** Footscray Park 

**Prerequisite(s)** VAM3021 Stress Analysis 1. 

**Content** Thick cylinders and Rotating Discs. Theory of plates and shells. Introduction to plasticity. Introduction to viscoelasticity, creep and stress relaxation. Introduction to finite element. Stress analysis by Finite Element. 

**Required Reading** Lecture Notes by Danh Tran. 


**Class Contact** five hrs of lectures and 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. 


**Class Contact** 60 hours of lectures, tutorials and laboratory work per semester.

**Assessment** Assignment 1: based on weeks 1-6 (Written report with a maximum of 5000 words, including calculations and sketches/drawings), Assignment 2: based on weeks 7-12 (Written report with a maximum of 5000 words, including calculations and sketches/drawings), 20%; Class Test: based on weeks 6, 10%; three hour examination, 50%.

**VAM3041 THERMODYNAMICS AND FLUID MECHANICS 2**

**Campus** Footscray Park

**Prerequisite(s)** VAM2042 Thermodynamics and Fluid Mechanics 1.

**Content** Availability analysis and second law efficiency of Thermodynamics. Carnot engines. Gas power cycles – the Otto cycle, Diesel cycle, gas-turbine cycle, and jet-propulsion cycle. Vapor and combined power cycles – Rankine cycle, using reheat and regeneration to improve the efficiency of the Rankine cycle. Introduction to viscous flows. Laminar and turbulent flows. Detailed analysis of wall shear flows (pipe and boundary layer) and free shear flows (jets and wakes).

**Required Reading** Comprehensive class, laboratory and activity notes.


**Class Contact** three hrs of lectures and two hrs of tutorial/labouratory 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%; Assignment 3: Lab on external flows (calculations, sketches, max word limit of 1000 words), 10%; Assignment 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.

**Content** Introduction to dynamics, Kinematics of particles – rectilinear and plane curvilinear motion co-ordinates systems, 3-D curvilinear motion and relative motion. Plane kinematics of rigid bodies – rectilinear and plane curvilinear motion, 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 kinetics 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, gyrosopic motion.


**Class Contact** 60 hours of lectures, tutorials and laboratory work.

**Assessment** Laboratory report #1 (2000 words equiv.), 5%; Laboratory report #2 (2000 words equiv.), 5%; Laboratory report #3 (2000 words equiv.), 5%; Computer based assignment, 10%, Mid-semester test (1 hr), 10%; Tutorial presentation (15 mins), 5%; three hour examination, 60%.

**VAM3072 MECHANICAL VIBRATIONS**

**Campus** Footscray Park

**Prerequisite(s)** RMA1002 Engineering Mathematics 1B and REP1003 Engineering Physics 1C.

**Content** 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, equivalent viscous damping, general forcing functions; 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 measurements, vibration control, random vibration analysis, random vibration simulation.


**Class Contact** 60 hours of lectures, tutorials and laboratory work.

**Assessment** Laboratory report #1 (2000 words equiv.), 5%; Laboratory report #2 (2000 words equiv.), 5%; Laboratory report #3 (2000 words equiv.), 5%; Computer based assignment, 10%; Mid-semester test (1 hr), 10%; Tutorial presentation (15 mins), 5%; three hour examination, 60%.

**VAM4021 COMPUTATIONAL MECHANICS**

**Campus** Footscray Park

**Prerequisite(s)** VAM3022 Stress Analysis 2, VAM3072 Mechanical Vibrations.


**Required Reading** Lecture Notes.


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


**VAM4032 MECHANICAL ENGINEERING DESIGN 2**

**Campus** Footscray Park

**Prerequisite(s)** VAM3031 Mechanical Engineering Design 1.


**Required Reading** Lecture notes.


**Class Contact** 2-3 hrs of lectures and 3-2 hrs of tutorials per week.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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


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


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 1-6, 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 take the form of narratives, whilst some of the arguments will be intensely mathematical, but illustrative of the narratives. It is expected that the written work will be based on rational argument and it will not be based on dubious ways of knowing and epistemologies. It is anticipated that students will be able to celebrate the achievements of scientific method over primitive myths. Each assessment task will be 500-1000 words.

VAM4062 MANUFACTURING AND POLYMER TECHNOLOGIES
Campus Footscray Park
Prerequisite(s) VAM 2062 Materials and Manufacture.


VAM4072 ADVANCED MECHANICS
Campus Footscray Park

Required Reading Lecture notes.


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


VAM4082 AUTOMOTIVE ENGINES, ENERGY AND ENVIRONMENT
Campus Footscray Park

**Recommended Reading**


**VAM4092 TRANSPORTATION AND PACKAGING DYNAMICS**

**Campus** Footscray Park

**Prerequisites**

VAM4072 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**


**Required Reading**


**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 1500 words), 15%; Written laboratory reports, assignment and presentation (calculation, sketch and maximum 2000 words), 20%; Final Exam: three hours, 50%.

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

**VAN1022 SOLID MECHANICS 1**

**Campus** Footscray Park

**Prerequisite(s)** SPH1601 Physics 1AP

**Content**

Review of concept of force. Equilibrium of coplanar forces. Requisite forces, component of forces; Levers and moments. Static equilibrium. Free body force diagrams; Pin jointed trusses; Beams, loads and reactions. Internal forces in beams. Bending moment and shear force diagrams for beams; 3D statical equilibrium; Direct stress and strain. Elastic modulus. Simple bending stress and strain. Shear stress and strain. Shear modulus; Poisson's ratio.

**Required Reading**


**Recommended Reading**


**Class Contact**

three hrs of lectures and two hrs of tutorials per week

**Assessment**

Mid-semester test: Based on weeks 1-6, 10%; Homework submissions: Based on 10 from 12 weeks, 5%; Assignment: Model design/making/testing/reporting 3000 words equivalence (individual report), 25%; three hour examination, 60%.

**VAN1032 INTRODUCTION TO DESIGN**

**Campus** Footscray Park

**Prerequisite(s)** END1832

**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., 2003, Strategies for Creative Problem Solving, Prentice Hall PTR; Class Notes (handouts provided by the lecturer and notes on WebCT).

**Recommended Reading**


**Class Contact**

Two hrs of lectures and three hrs of tutorials/computer based drawing classes per week.

**Assessment**

Assessment: Six tutorial submissions, 24%; Peer review of draft design reports (1000 words – group assignment), 8%; Group submission (draft design report), 8%; Design notebooks, 10%; Final oral presentation, 10%; Creative design model, 10%; Final design report (1000 words – group assignment), 30% Drawing: Class test, 10%; Two computer generated drawing tests, 10%; Eight assignments (one per week over eight weeks), 20%; Word limits are not applicable for the drawing component. Weighting: 60% Design and 40% Drawing = Final Subject %.

**VAN1051 ENGINEERING PROFESSION**

**Campus** Footscray Park

**Prerequisite(s)** Nil.

**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. Topics

**experimental data, curve fitting. Statistical and error analysis of experimental data, Solutions of equations.**

**Required Reading**


**Recommended Reading**


**Class Contact**

One hrs of lectures and four hrs of tutorial/labouratory sessions per week.

**Assessment**

Computing Assignment 1: based on weeks 1-5 (max of 1500 words report together with the solution printout and program source code), 10%; Computing Assignment 2: based on weeks 6-11 (max of 1500 words report together with the solution printout and program source code), 10%; Class Test: based on weeks 1-6, 15%; Class Test: based on weeks 6-12, 15%; Four – Laboratory Reports (limit of 500 words reports on the individual experiments), 40%; Oral Presentation, 10%.
considered include the role of an engineer, ethics, approaches to problem solving and design, the environment and sustainable development, professional written and oral communication skills including summarising, synthesising, referencing, report writing and poster presentation and communication processes and practices. 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 Health, Engineering and Science, 7th edn.

**Class Contact**

Three hours per week for one semester based on one hour of lecture and two hour workshop.

**Assessment**

Synthesis, 10%; Oral presentations (from demonstrations, debates, poster presentations, oral reports), 20%; Research report, 15%; Laboratory report, 15%; Examination, 40%.

---

**VAN2021 SOLID MECHANICS 2**

**Campus** Footscray Park

**Prerequisite(s)** VAN202 Solid Mechanics 1

**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/elastoplastic buckling and combined effect of direct and bending stresses; Stresses and strains in two dimensions, Mohr’s circle, principal stress; Elastic/plastic bending stresses and shear stress distribution in beams; 3D statical equilibrium. Analysis of 3D statically determinate structures; Unsymmetrical bending. Shear centre. Principal axes; Torsion in solid and thin-wall tubes. Open and closed sections; Simple frames under bending and torsion.

**Recommended Reading**


**Class Test**

Model design/making/testing/reporting: 3000 words equivalence (individual report), 25%; three hour examination, 60%.

---

**VAN2032 ENGINEERING DESIGN**

**Campus** Footscray Park

**Prerequisite(s)** VAN 1022 Solid Mechanics 1

**Content**

Static Design: The static 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. Dynamic Design: The dynamic design covers, Design uncertainties and statistics, fits and tolerances. Theories of static failure, Low and high cycle fatigue failure, Thermal, chemical and linear impact failure.

**Recommended Reading**


**Class Contact**

Two hrs of lectures and three hrs of tutorials per week

**Assessment**

Three hour mid-term supervised assignment (involves calculations, sketches, max word limit of 2000), 20%. The assignment will be done under supervision to control plagiarism. 3 hour mid-term supervised assignment (involves calculations, sketches, max word limit of 2000), 20%. The assignment will be done under supervision to control plagiarism. 3 hour examination, 60%.

---

**VAN2041 THERMOLIGHTS**

**Campus** Footscray Park

**Prerequisite(s)** REP1002, RMA1002

**Content**


**Required Reading**


**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 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%.

---

**VAN2061 ENGINEERING MATERIALS**

**Campus** Footscray Park

**Prerequisite(s)** VAN 1022 Solid Mechanics 1 and REP1001 Engineering Physics 1

**Content**


**Required Reading**


**Recommended Reading**


**Class Contact**

Four hrs of lectures/common tutorials/field trips/discussion classes and one hr of tutorials and laboratory classes per week

**Assessment**

Test 1 in week 3, 7.5%; Test 2 in week 6, 7.5%; 2 Laboratory Reports. Students are required to achieve a minimum of 40% in these assessment tasks to successfully complete the subject (reports of maximum of 10 pages including calculations), 15%; three hour examination, 70%; Class tests and assignments, 25%; end of semester examination, 75%.

---

**VAN3052 ENGINEERING MANAGEMENT**

**Campus** Footscray Park

**Prerequisite(s)** Nil

**Content**

Introduction to network planning, critical path analysis and resource allocation. Introduction to management of the construction process. Feasibility studies and project evaluation. Methods for making economic studies of engineering projects. Strategies for plant selection.

**Required Reading**

**Class Contact**
- Three hrs of lectures; 1hr of tutorial and 1hr of computer laboratory to complete VUPAC work.

**Assessment**
- Tutorial 1: based on weeks 1-6 (calculation, sketches max words 200), 10%;
- Tutorial 2: based on weeks 7-11 (calculation, sketches max words 200), 10%;
- Assignment 1: Use of application software Excel: (computer applications, max word 300), 10%;
- Assignment 2: Use of application software MSProject 2000 (computer applications, max word 300), 10%;
- Three hour examination, 60%.

**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 course 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

**Class Contact**
- To be advised by the project supervisor, and relevant to the specific project undertaken.

**Assessment**
- One hr of lecture/discussion and three hrs of tutorials/project work per week.

**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. Tending 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 appointing 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. Bhuta and V. Sarma, Lecture Notes

**Class Contact**
- Three hrs of lectures; one hr of tutorial and one hr of computer laboratory session 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 software packages, 15%;
- Three hour examination, 60%.

**VAR2001 MECHATRONICS 1**

**Campus** Footscray Park

**Prerequisite(s)**
- VAN1001 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 instrumentation, application of power motors, actuators and transmission devices.

**Required Reading**

**Recommended Reading**
- Phillip McKerrow 'Introduction to Robotics', Addison Wesley, 1995;

**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 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 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.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**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/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research website at the following link:


**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 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.

**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 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 staff and where appropriate by a supervisor from another institution or from industry.

**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 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.

**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/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research website at the following link:


**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. 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 Three hours per week for one semester.

Assessment Assessment will be by project work and report.

VCC8055 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. 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 Three hours per week for one semester.

Assessment Assessment will be by project work and report.

VCP5600 PROJECT MANAGEMENT FUNDAMENTALS
Campus Footscray Park

Prerequisite(s) Nil.

Content The subject will introduce and define project management as applicable to the concept, development design and documentation, construction and maintenance, of buildings and to introduce participants 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 Management. Construction industry in economy and the building industry; the building process in private sector. Structure of building industry – historically and the current trends; management 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 relationship 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 development project. The report will contain a major group project, 40%; two individual assignments, 20%; 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. 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 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.


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 contract used in the construction industry; review and interpret indicative cost of buildings by project management techniques. The subject examines formal organisational structures; role of project manager. Evaluation of

Required Reading To be advised by lecturer.


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 economic 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.


Class Contact Three hours per week for one semester.

Assessment Group Individual assignment, 10%; group assignment 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.

VCP5716 PROJECT DEVELOPMENT

Campus Footscray Park

Prerequisite(s) Nil


Required Reading To be advised by lecturer.


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 The 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.

VCP5736 FACILITY LIFE CYCLE COSTING
Campus Footscray Park
Prerequisite(s) Nil
Content A description 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 for building and the effect 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 optimisation; maintenance; 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 services 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, Housebuilder'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. Definitions. Relationship to other Acts, new Acts. Building Approvals process. Introduction to BCA, Part A. Classes of buildings Parts C, D, F and G. Accreditation: Protection of adjoining property. Enforcement. BCA and plan check. Fire as hazard to life and property. Overview of current knowledge in fire start and spread in buildings. Overview of fire safety and regulations in Australia; current practices in regulation and building control; fire safety in new proposed Code. Overview of planning schemes in Victoria. Need for a Uniform Planning Scheme; need for optimisation of planning process. Local Government planning officials’ views on a rational new system; industry perception of the planning system’s current operation; possibility of planning being accomplished by certification. International – scene and practice – what can we learn from it.
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) VCP5600 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) Nil


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) VMM5782 Research Techniques.
Content One of the following topics, subject to staff availability: VMM5782/Composite materials design, VMF5882 Flow measurement techniques, VMS5772 Optimization, VM5772 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.


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

Assessment Two assignments (20%)(each of 10%, 2500-5000 words), one one-hour test (10%), laboratory (20%), and Final three hour examination (50%).

VMP5872 RESEARCH PROJECT
Campus Footscray Park
Prerequisite(s) VMW5771 Research Techniques
Content Methods of formulating research problem, literature survey. Techniques of poster presentation, final report, research seminar. Carrying out a research project on choice: acquiring data, processing data. Presenting findings in seminar, by poster presentation and writing research report.


Class Contact Lectures, tutorials and project presentation in the form of poster and seminars, 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/ResearchResearchTraining/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/

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/ResearchResearchTraining/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/

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/ResearchResearchTraining/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/

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/ResearchResearchTraining/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/

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-ε 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.

**Required Reading**

**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 three-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.

---

**VMV5781 ADVANCED DYNAMICS AND VIBRATIONS**

**Campus**
Footscray Park

**Prerequisite(s)**
Nil.

**Content**

**Required Reading**

**Recommended Reading**

**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.

---

**VMV5782 COMPUTATIONAL DYNAMICS**

**Campus**
Footscray Park

**Prerequisite(s)**
VMV5781 Advanced Dynamics and Vibration.

**Content**

**Required Reading**

**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.

---

**VMWS5682 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.

**Required Reading**

---

**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 Poincaré, Kuhn, Feynman and others. Design and Analysis of Experiment. Error and uncertainty. Statistical Data Analysis. Taguchi method for design and experiments.

**Required Reading**

**Recommended Reading**

**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.

---

**VMW5682 EXPERIMENTAL TECHNIQUES AND SIGNAL PROCESSING**

**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.

**Required Reading**

**Recommended Reading**

**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.
SCHOOL OF BIOMEDICAL SCIENCES

Below are details of undergraduate and postgraduate courses offered by the School of Biomedical Sciences in 2007. 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.

Location
The course is currently offered at the St Albans Campus, but individual subjects may be offered at the Footscray or Werribee Campuses.

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.

Year 1

Semester 1

<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 (AUD)</th>
<th>From 2005 (AUD)</th>
<th>Full Fee (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1501</td>
<td>FOUNDATIONS IN BIOMEDICAL SCIENCE A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1514</td>
<td>FUNCTIONAL ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1518</td>
<td>HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1110</td>
<td>CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP1012</td>
<td>PSYCHOLOGY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

Elective

Semester 2

<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 (AUD)</th>
<th>From 2005 (AUD)</th>
<th>Full Fee (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1502</td>
<td>FOUNDATIONS IN BIOMEDICAL SCIENCE B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1524</td>
<td>FUNCTIONAL ANATOMY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1528</td>
<td>HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1120</td>
<td>CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP1013</td>
<td>PSYCHOLOGY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

Elective

Year 2

Semester 1

<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 (AUD)</th>
<th>From 2005 (AUD)</th>
<th>Full Fee (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM2260</td>
<td>DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2530</td>
<td>PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Two of the Following OR other Science, Psychology, Communications, Management and Marketing 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 (AUD)</th>
<th>From 2005 (AUD)</th>
<th>Full Fee (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1580</td>
<td>FUNCTIONAL ANATOMY 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2365</td>
<td>MEDICAL MICROBIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>RBM2560</td>
<td>MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2610</td>
<td>BIOMEDICAL SCIENCES AND SOCIETY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Semester 2

<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 (AUD)</th>
<th>From 2005 (AUD)</th>
<th>Full Fee (AUD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM2540</td>
<td>PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

43
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

(RBM2800 CARDIORESPRATORY AND RENAL PHYSIOLOGY 12 0.1250 2 $712 $890 $1,584
Two of the following OR other Science, Psychology, Communications, Management and Marketing electives
RBM2580 ADVANCED FUNCTIONAL ANATOMY 12 0.1250 2 $712 $890 $1,584
RBM3610 BIOMEDICAL SCIENCE, ETHICS AND VALUES 12 0.1250 2 $712 $890 $1,584
RBF2330 CELL BIOLOGY 12 0.1250 2 $712 $890 $1,584

Year 3
Semester 1
Choose at least three of following core Units of Study below per semester
RBM3264 ADVANCED NERVE AND MUSCLE PHYSIOLOGY 12 0.1250 2 $712 $890 $1,584
RBM3550 GROWTH AND EARLY DEVELOPMENT 12 0.1250 2 $712 $890 $1,584
RBM3590 ADVANCED EXPERIMENTAL TECHNIQUES 12 0.1250 2 $712 $890 $1,584
RBM3810 WELLNESS 1 12 0.1250 2 $712 $890 $1,584
Semester 2
RBM3640 ADVANCED NEUROSCIENCES 12 0.1250 2 $712 $890 $1,584
RBM3560 GROWTH, DEVELOPMENT AND AGING 12 0.1250 2 $712 $890 $1,584
RBM3660 HUMAN DEVELOPMENTAL AND CLINICAL GENETICS 12 0.1250 2 $712 $890 $1,584
RBM3800 PHARMACOLOGY 12 0.1250 2 $712 $890 $1,584
RBM3820 WELLNESS 2 12 0.1250 2 $712 $890 $1,584
RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT 12 0.1250 2 $712 $890 $1,584
RBM3910 PROJECT 12 0.1250 2 $712 $890 $1,584
RBM3960 NUTRITIONAL FRONTIERS 12 0.1250 2 $712 $890 $1,584
Electives
RBM2201 CONSERVATION GENETICS 12 0.1250 2 $712 $890 $1,584
RBM3101 GEOGRAPHIC INFORMATION SYSTEMS (GIS) FOR CONSERVATION & HEALTH 12 0.1250 2 $712 $890 $1,584
RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT 12 0.1250 2 $712 $890 $1,584
RBM3960 NUTRITIONAL FRONTIERS 12 0.1250 2 $712 $890 $1,584
Other electives from semesters 1 or 2 with 12 credit points

BACHELOR OF SCIENCE IN ECOLOGY AND SUSTAINABILITY (I)
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>Semester 1</th>
<th>Year 1</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></td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500 $625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACE1911 COMMUNICATIONS FOR THE PROF SCIENTIST 1</td>
<td>RBF1310 BIOLOGY 1</td>
<td>RBF1415 GLOBAL ENVIRONMENTAL ISSUES</td>
<td>OR</td>
<td>RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
</tr>
<tr>
<td>OR</td>
<td>Elective</td>
<td>Semester 2</td>
<td>ACE1912 COMMUNICATIONS FOR THE PROF SCIENTIST 2</td>
<td>RBF1320 BIOLOGY 2</td>
<td>RBF1360 AUSTRALIAN LANDSCAPES AND BIOTA</td>
<td>AND/OR</td>
</tr>
</tbody>
</table>
### prescribed and free electives

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.

## Prescribed Electives

### Ecology and Natural Resource Management Stream

<table>
<thead>
<tr>
<th>Subject Description</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>RCS1110 Chemistry For Biological Sciences A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RMA1110 Mathematics For the Biological and Chemical Sciences 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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.

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>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><strong>Ecology and Community Development Stream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASA1021 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 1 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASA1022 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 2 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>Students taking this stream should choose two electives from the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASA2021 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 3 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASA2022 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 4 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASC3095 CONFLICT RESOLUTION IN GROUPS AND COMMUNITIES</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td><strong>Ecology and Tourism/Business Stream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHO1190 INTRODUCTION TO TOURISM</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO2286 NATURE BASED TOURISM</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>Students taking this stream should choose two electives from the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BHO2255 TOURISM ENTERPRISE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO1192 TRAVEL INDUSTRY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO3437 DESTINATION PLANNING AND DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO3500 HOSPITALITY AND TOURISM INDUSTRY PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO1171 INTRODUCTION TO MARKETING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BAO1101 ACCOUNTING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td><strong>Ecology and Human Bioscience/Wellness Stream</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM2530 PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2540 PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM3810 WELLNESS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM3820 WELLNESS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Students taking this stream could include electives from the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2560 MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2610 BIOMEDICAL SCIENCES AND SOCIETY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM1514 FUNCTIONAL ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM1524 FUNCTIONAL ANATOMY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2361 SAFETY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td><strong>Suitable Free Electives</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some electives may be prescribed for certain streams.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCS1110 CHEMISTRY FOR BIOLOGICAL SCIENCES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCS1120 CHEMISTRY FOR BIOLOGICAL SCIENCES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>ASA1021 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 1 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASA1022 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 2 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASA2021 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 3 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASA2022 COMMUNITY DEVELOPMENT THEORY AND PRACTICE 4 (ASIA PACIFIC STREAM)</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>ASC3095 CONFLICT RESOLUTION IN GROUPS AND COMMUNITIES</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>BAO1101 ACCOUNTING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO1171 INTRODUCTION TO MARKETING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO1190 INTRODUCTION TO TOURISM</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO1192 TRAVEL INDUSTRY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO2255 TOURISM ENTERPRISE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO3437 DESTINATION PLANNING AND DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BHO3500 HOSPITALITY AND TOURISM INDUSTRY PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM1514 FUNCTIONAL ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2361 SAFETY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2530 PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM2540 PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>
SCHOOL OF BIOMEDICAL SCIENCES

<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>RBF3530 ENVIRONMENTAL PHILOSOPHY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBF3540 LEADERSHIP AND THE ENVIRONMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

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 there is no similar course in Nutritional Therapy in Australia, and this course will be the first in Australasia.

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 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBF2410 FOOD COMPONENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1514 FUNCTIONAL ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1518 HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1528 HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1810 NUTRITIONAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1830 DIET THERAPY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2570 PHYTOPHARMACEUTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</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>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBF3240 FUNCTIONAL FOODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2530 PATHOPHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2540 PATHOPHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2560 MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2850 NUTRITIONAL THERAPEUTICS A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2855 NUTRITIONAL THERAPEUTICS B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM3810 WELLNESS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3820 WELLNESS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3850 NUTRITIONAL THERAPEUTICS C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3855 NUTRITIONAL THERAPEUTICS D</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3960 NUTRITIONAL FRONTIERS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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 (awaiting formal notification):

- Australian Nutrition Society;
- British Association of Nutritional Therapy;
- Australian Complementary Health Association;
- Australasian Integrative Medicine Association.
BACHELOR OF SCIENCE IN OCCUPATIONAL HEALTH AND SAFETY

Course Code: SBOH

Course Objectives
The aims of the courses are 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: 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
Normal entry requirements for articulation to the Bachelor of Science is the successful completion of a Diploma in Occupational Health and Safety that is equivalent with the course undertaken at Swan TAFE. A significant number of such applicants are expected to be occupational health and safety professionals seeking to upgrade their Diploma qualifications to a degree in Occupational Health and Safety. Admission requirements may be varied by the Head of School for applicants who possess other appropriate TAFE or university qualifications related to occupational health and safety.

Students with a Diploma in Health Occupational Health and Safety, will complete 13 units to upgrade their qualification to a Bachelor of Science in Occupational Health and Safety. Students who enrol with a Diploma of Science in Occupational Health and Safety that is not equivalent with subjects undertaken at Swan TAFE may need to undertake a mix of additional units if they wish to upgrade to a degree.

The course aims at maximising student access by providing flexibility and modulation in the delivery of subjects. Block mode teaching delivered at Swan TAFE, Western, Australia, is available. Students complete all units by distance education mode.

Course Duration
Students who enrol into the degree course with a Diploma in Occupational Health and Safety (equivalent with Swan TAFE Diploma OHS) may complete the upgrade after two years of part-time study. Students with other qualifications may need to complete additional subjects.

Course Structure
Continuing Students Level 3 Subjects required to upgrade from Diploma in Health-Occupational Health and Safety to Bachelor of Science in Occupational Health and Safety.

<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>RBM2061</td>
<td>OCCUPATIONAL HYGIENE SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2161</td>
<td>ERGONOMIC SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2261</td>
<td>PUBLIC AND ENVIRONMENTAL HEALTH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2361</td>
<td>SAFETY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3061</td>
<td>EPIDEMIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3161</td>
<td>TOXICOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3261</td>
<td>RISK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3361</td>
<td>OCCUPATIONAL HEALTH AND SAFETY PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

New Course 2007

Level 1

Semester 1

<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>RBM1501</td>
<td>FOUNDATIONS IN BIOMEDICAL SCIENCE A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1518</td>
<td>HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0110</td>
<td>MANAGEMENT AND ORGANISATION BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1061</td>
<td>SAFETY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Semester 2

<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>RBM1502</td>
<td>FOUNDATIONS IN BIOMEDICAL SCIENCE B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM1528</td>
<td>HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO1105</td>
<td>BUSINESS LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM1260</td>
<td>SAFETY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Level 2

Semester 1

<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>RBM2060</td>
<td>ERGONOMICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2050</td>
<td>OCCUPATIONAL HYGIENE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0322</td>
<td>HUMAN RESOURCE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO2233</td>
<td>HEALTH AND SAFETY LAW</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
</tbody>
</table>

Semester 2

<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>RBM2461</td>
<td>WORKPLACE PLACEMENT A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0347</td>
<td>TRAINING AND DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0323</td>
<td>EMPLOYEE RELATIONS MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0328</td>
<td>HEALTH AND SAFETY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Level 3

Semester 1

<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>RBM2261</td>
<td>PUBLIC AND ENVIRONMENTAL HEALTH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2361</td>
<td>SAFETY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3061</td>
<td>EPIDEMIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3161</td>
<td>TOXICOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Semester 2

<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>RBM3361</td>
<td>OCCUPATIONAL HEALTH AND SAFETY PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BM0351</td>
<td>WORKPLACE INDUSTRIAL RELATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3261</td>
<td>RISK MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3462</td>
<td>WORKPLACE PLACEMENT B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
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:

| Semester 1 | RBF4001 SCIENCE HONOURS | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| Semester 2 | RBF4002 SCIENCE HONOURS | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |

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

Course Code: SHBM

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.

| Semester 1 | RBM4001 SCIENCE HONOURS 1 | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| Semester 2 | RBM4002 SCIENCE HONOURS 2 | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
SUBJECTS

Below are subject details for courses offered by the School of Biomedical Sciences in 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

RBF1150 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.

Required Reading

Recommended Reading

Class Contact
Four hours per week for one semester.

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

RBF1160 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 evolutionary 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
Recommended Reading

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%.

RBF1170 CELL 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.

Required Reading

Recommended Reading

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 (60%).
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, negotiating, consulting and drawing up and presenting project proposals. Insights into the range of tools 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 for one semester, comprising two hours of lectures and two hours of practical.

Assessment Practical: 60%; examination: 40%.

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 on Ecocentrism, 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.

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 impact 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%).

**RBF3610 BIOSTATISTICS**

Campus: St Albans (offered subject to minimum enrolments in 2004).

**Prerequisites:** Year 12 Mathematics or co-ordinators discretion, RMA1110 Maths 1 and RMA1120 Maths 2.

**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.

**Recommended Reading:**

**Class Contact:** Four hours per week over one semester, comprising two hours of lectures and two hours of interactive practicals/tutorials per week.

**Assessment:** Assignments: 30%; Examinations: 70%.

**RBF3620 CONSERVATION AND SUSTAINABILITY**

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 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.

**Required Reading:**

**Class Contact:** Four hours per week in total, timetabled as a block, 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%.

**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.

**Required Reading:**

**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 the organisms contained in these ecosystems and key ecological relationships between organisms. Case studies of rehabilitation of several of these ecosystems, including approaches based on understanding of biology and ecology. Practical experience in rehabilitation projects.

**Required Reading:**

**Recommended Reading:**
- Bradley, J., 1988, Bringing back the bush, Sandowne Press (Sydney).

**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-ordinator 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, biological indicators of pollution induced environmental stress; sequestering of exogenous compounds; partitioning; sources and environmental transport; uptake and depuration; case studies.

**Required Reading**
To be advised.

**Recommended Reading**

**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%.

**RBF3660 INDIGENOUS SOCIETY AND ENVIRONMENTAL MANAGEMENT**

**Campus** St Albans (offered subject to minimum enrolments in 2004)

**Prerequisites** Nil

**Content**

**Required Reading**

**Recommended Reading**

**Class Contact**
Two hours per week

**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 assessment, identification and occupational health and safety management. Students will acquire this knowledge and skills to implement safety standards, guidelines, codes of practice and regulations on these hazards.

**Content**
This unit gives 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 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 the use of safety standards, guidelines, codes of practice and regulations. Protection and emergency procedures will also be covered as part of this unit.

**Required Reading**
- Australian and New Zealand Standards AS/NZS 1269.1:2005

**Occupational noise management - Measurement and assessment of noise exposure AS/NZS 2430.3.1:2004**
Classification of hazardous areas - Examples of area classification – General AS/NZS 2885 Set-2005 Safe working in a confined space Set AS 2848 2-1991
- NOHSC Australian Occupational Health and Safety Index – Physical hazards
- Electrical%20hazards

**Victorian Workcover Authority – Regulations**

**Major hazard facilities guidance note. Worksafe January 2002**

**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

2. The tissue level of organisation
   - The principles of support and movement
   - The skeletal system
   - The bone tissue, the axial skeleton, and the appendicular skeleton
   - Joints
   - Muscle tissue
   - Muscular system

3. Control systems of the human body:
   - The nervous system
   - The special sensors
1. Maintenance of the human body
   - The autonomic nervous system
   - The endocrine system
   - 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

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

Required Reading

Recommendation

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.
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 and SI units, biophysics, 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 physical 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 lecturer.

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 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.

FACULTY OF HEALTH, ENGINEERING AND SCIENCE


RBM1520 HUMAN BIOSCIENCE 2 - PSYCHOLOGY
Campus St Albans, Werribee
Prerequisite(s) Students would normally be expected to successfully complete RBM1510 Human Biology 1A.
Content This subject aims to enable the students to extend theoretical knowledge of normal human structure and function developed in RBM1510 Human Biology 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.
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 Practical assignments and test 50%, theory test and examination 50%.

RBM1524 FUNCTIONAL ANATOMY 2
Campus St Albans
Prerequisite(s) RBM1514 Functional Anatomy 1 and RBM1518 Human Physiology.
Co-requisite(s) RBM151582 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 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%.

RBM1525 ANATOMY AND PHYSIOLOGY
Campus St Albans
Prerequisite(s) Nil
Content This unit is to build upon the introductory knowledge of human structure and function covered in RBM1515 Anatom 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.

RBM1528 HUMAN PHYSIOLOGY 2
Campus St Albans
Prerequisite(s) RBM1518 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 unit of study 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 relationships 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%.

RBM1580 FUNCTIONAL ANATOMY 3
Campus St Albans
Prerequisite(s) RBM1514 or RBM1528
Content This subject introduces students to functional anatomy. After a brief introduction to the bones, joints, muscles, vessels and nerves of the body; students study gross anatomy using a regional approach. 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 by introducing students to gross anatomy, using models and wet specimens, cross-sectional anatomy, kinesiology, gait analysis, posture, massage, muscle testing, exercise, stretching and awareness through movement and posture techniques. Topics studied in this subject may be interleaved with those of the subject Functional Anatomy 2 and/or 3.

**Required Reading**


**Class Contact** Six hours per week for one semester; three hours lecture, three hours practical/tutorial.

**Assessment** Theory examination 55%, practical examination and oral examination 45%.

---

**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 dietary practices; impact 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 hour lecture, two hour 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 corrective strategies to clients, codes of ethical practice in dealing with clients.


---

**Class Contact** Four hours/week for one semester comprising 3 hours 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.

**Required Reading** Lee, G., & Bishop, B. (2002). Microbiology and infection control for health professionals (2nd ed.). Australia: Prentice Hall.


**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 contact hours. Laboratory and practical sessions have a hurdle requirement of at least 80% attendance.

---

**RBM2050 OCCUPATIONAL HYGIENE**

**Campus** St Albans

**Prerequisite(s)** 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 context of factors relating to the workplace environment at the time of sampling.

**Content** This unit will cover the methods for monitoring and sampling tostricators 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 measurement. Aims to describe the level of contaminant exposure which is matches 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 hour practical class for each week of a semester.

Assessment Practical class for each week of a semester.

Class Contact One hour practical class for each week of a semester.

Assessment Practical class for each week of a semester.

RBM2060 ERGONOMICS

Campus St Albans
Prerequisites RBM1502 Fundamentals in Biomedical Sciences B and RBM1528 Human Physiology 2
Co-requisites
Learning Outcomes The outcome from studying this unit will be that students will be able to: 1. Apply ergonomic principles and methodologies to evaluate and improve the workplace environment. 2. Apply anthropometric and biomechanical methods in ergonomic assessment and design. 3. Critically review the role of ergonomics in the prevention and management of occupational injury.

Content This unit covers the principles and applications of ergonomics, including body space, anthropometry, biomechanics, and the design of work systems. It also includes an introduction to research methodologies and critical evaluation of ergonomic principles and practices.

RBM2201 CONSERVATION GENETICS

Campus St Albans
Prerequisites RBF1310 Biology 1, RBF1320 Biology 2, RBF2610 Fundamentals of Ecology
Co-requisites
Learning Outcomes Upon completion of the subject, students will have a thorough understanding of the role and importance of genetics to the management of species and populations and its application to the field of natural resource management as a whole, including the limitations of genetic data. As well as having a theoretical basis on which to base management decisions, students will have practical experience with the methods used in modern genetics and how these tools can be applied to the management of species and populations. Students will be able to critically analyse published data relating to taxonomy and phylogenetic relationships and their implications for conservation. Students will therefore be equipped to make decisions about the appropriateness of reintroduction of plants or animals, and 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 phylochronology, consequences of hybridization, management of hybridization and kinship
• Populations: structure, gene flow 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.


Class Contact Five hours per week comprising two hours lecture per week and the equivalent of three hours per week practical work including laboratory sessions, field trips and computer sessions.

Assessment Two hour written examination (40%). CGA: A2, P2, I2. Written assignment of 2000 words (30%). CGA: 1/3, P3, W2/3 Class Presentation of the assignment (10%), CGA–2/3, I2 Practical reports and simulations (20%). CGA: C2, P2, W2, A2.

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

Class Contact 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 (1000) words worth 30% of total mark, and a two (2) hour written end of semester examination 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.

RBM2260 DIET AND NUTRITION
Campus St Albans

Prerequisite(s) RBM1528 Human Physiology 2 or equivalent

Content This subject will demonstrate the relationships between gastrointestinal function, 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 ENVIROMENTAL 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 waste 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 equivalents delivered online per week for one semester.

Assessment Assignments, tutorial topic questions and tests.

RBM2361 SAFETY PRACTICE
Campus St Albans

Prerequisite(s) RBM2161 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 RBM1528 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 defence 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
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

methods and food safety. To investigate application of microorganisms in medicine, industry and biological work products.

Required Reading

Recommended Reading

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
RBM1061 Safety 1, RBM2061 Safety 2, BLO2233 Health and Safety Law

Co-requisites

Learning Outcomes
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 prevent workers so as to reduce injury. They will show some applied understanding of the process for rehabilitation of injured workers and return to work programs.

Content
This placement will allow students to undertake a structured work experience in setting controls, prevention and protection to reduce harm in the workplace. Within their workplace(s) they need to show that they have practiced OHS which is reflected in knowledge of the particular hazards and risks gained from their workplace experience(s) and workplace policies and programs.

Required Reading
Johnstone R 2004 Occupational health and safety law and policy - text and materials 2nd Ed. - Lawbook Co., Pyrmont, N.S.W

Recommended Reading

Class Contact
Attend for a minimum of 60 hours in a designated workplace(s).

Assessment
1, W1, A2, D2 Assessment will be based on applied understanding of the workplace(s) occupational health and safety policies and procedures as well as the recording and analysis of incidents, workers' compensation cases and return to work programs. Where possible there needs to be some discussion related to topics covered in Safety 1 (e.g. machine guarding and interlocking) and Safety 2 (e.g. comment on work injuries and incidents).

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 haematology, 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.

Required Reading

Recommended Reading

Subject Hours
40 hours per semester of lectures and tutorial.

Assessment
Test, 30%; examination, 70%.

RBM2528 PATHOPHYSIOLOGY IN MIDWIFERY
Campus: St Albans

Prerequisite(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 neoplasia; to elucidate the underlying mechanisms which result in clinical manifestation; and to present the rationales for therapeutic interventions. Microbiology will be discussed with reference to the pathogenic 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. Other topics to be covered will include disorders of: blood (eg. anemias) and body defences (eg. incompatibilities), the renal system, fluid and electrolytes, the reproductive system (eg. sexually transmitted diseases, infertility), endocrinology, metabolism (eg. diabetes) and
nutrition associated with pregnancy. Genetic and developmental abnormalities of the foetus will also be examined.


Recommended Reading Lee, G., & Bishop, B., Microbiology and Infection Control for Health Professionals; (2nd Ed) Pearson Education, Australia; 2002.


RBM2530 PATHOPHYSIOLOGY 1
Campus St Albans
Prerequisite(s) RBM1520 or RBM1528 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 techniques and the communication of scientific information by a series of presentations. There may be some interchange of topic material relating to specific body systems between RBM2530 and RBM2540 and the specific diseases chosen to illustrate major processes may vary as appropriate.


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.

RBM2540 PATHOPHYSIOLOGY 2
Campus St Albans
Prerequisite(s) RBM2530 Pathophysiology 1 or equivalent

Content This subject primarily examines the effects of dysfunction in particular human body systems, drawing on the knowledge of basic pathological processes and overall regulation of the human body discussed in RBM2530. Overall organ and system dysfunction such as hepatic, renal, cardiovascular and respiratory failure will be discussed. Specific disorders of the following systems will also be discussed: cardiovascular, renal, respiratory, blood, reproductive, gastrointestinal and musculoskeletal. Major disease types and processes such as circulatory shock, atherosclerosis, disorders of acid-base balance and sexually transmitted diseases will be examined and the psychosocial effects of such disorders will be included. Specific diseases will be chosen to illustrate the major concepts as appropriate. Students are introduced to further techniques for assessment of disorders, which may include physical assessments, spirometry, electrocardiography and various biochemical analyses. There may be some interchange of topic material relating to specific body systems between RBM2530 and RBM2540 and the specific diseases chosen to illustrate major processes may vary as appropriate.


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.
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 microorganisms, their pathogenic potential and infection control. The pathophysiological principles underlying disorders of body systems will be discussed; for example, in cardiovascular pathophysiology, shock, cardiac failure, hypertension and atherosclerosis, will be examined. Other topics covered will include disorders of the haematological, immunological, respiratory, renal, nervous, endocrine, gastrointestinal, musculoskeletal and reproductive 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**
Kanagaratnum N, Botany Monograph. Victoria University, St Albans, 2005.

**Recommended Reading**

**Prerequisite(s)**
RBM1518 Human Physiology 1, RCS1120 Biochemistry 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**
Behnke, R.S., 2000, Kinetic Anatomy, Human Kinetics Australia.

**Class Contact**
Six hours per week for one semester comprising three one-hour lectures and one three-hour tutorial/practical session.

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

**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%.

---

**RBM2540 ADVANCED FUNCTIONAL ANATOMY**

**Campus** St Albans

**Prerequisite(s)**
RBM 1524

**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 techniques, 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 included in the subject may be interchanged with those of the subject RBM 1514 Functional Anatomy 1 and RBM 1524 Functional Anatomy 2.

**Required Reading**
Behnke, R.S., 2000, Kinetic Anatomy, Human Kinetics Australia.

**Class Contact**
Six hours per week for one semester comprising three one-hour lectures and one three-hour tutorial/practical session.

**Assessment**
Theoretical examination 55%, practical examination 20%, written assignment 25%.
SBIO 4000 HUMAN PHYSIOLOGY

Course Description

This course covers the physiological mechanisms underlying the functioning of the human body, including the cardiovascular, respiratory, gastrointestinal, nervous, endocrine and immune systems. It focuses on the integration of systems and the impact of disease on these systems. The course emphasizes the application of physiological concepts to clinical scenarios and the development of critical thinking and problem-solving skills.

Learning Outcomes

1. Describe the normal physiological functions of the cardiovascular, respiratory, gastrointestinal, nervous, endocrine and immune systems.
2. Analyze the impact of disease on these systems.
3. Develop critical thinking and problem-solving skills in the context of physiological mechanisms.
4. Demonstrate an understanding of the role of physiological principles in the practice of medicine and healthcare.

Required Reading


Assessment

The course assessment includes regular homework assignments, in-class quizzes, a mid-term examination, a final examination, and a project. The final grade is determined based on a combination of these components.

Additional Information

This course is designed for students pursuing careers in the healthcare profession. It provides a foundational understanding of the physiological principles necessary for advanced study in medicine and related fields.

SCHOOL OF BIOMEDICAL SCIENCES

SBIO 4000 HUMAN PHYSIOLOGY

Course Description

This course covers the physiological mechanisms underlying the functioning of the human body, including the cardiovascular, respiratory, gastrointestinal, nervous, endocrine and immune systems. It focuses on the integration of systems and the impact of disease on these systems. The course emphasizes the application of physiological concepts to clinical scenarios and the development of critical thinking and problem-solving skills.

Learning Outcomes

1. Describe the normal physiological functions of the cardiovascular, respiratory, gastrointestinal, nervous, endocrine and immune systems.
2. Analyze the impact of disease on these systems.
3. Develop critical thinking and problem-solving skills in the context of physiological mechanisms.
4. Demonstrate an understanding of the role of physiological principles in the practice of medicine and healthcare.

Required Reading


Assessment

The course assessment includes regular homework assignments, in-class quizzes, a mid-term examination, a final examination, and a project. The final grade is determined based on a combination of these components.

Additional Information

This course is designed for students pursuing careers in the healthcare profession. It provides a foundational understanding of the physiological principles necessary for advanced study in medicine and related fields.

SCHOOL OF BIOMEDICAL SCIENCES
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 best practice western medicine communications skills when talking with people who are dying or have a psychiatric condition;
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.

Required Reading
Lippincott Williams and Wilkins.

Recommended reading:

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 dependence, 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 industries and the likelihood of chance, bias and confounding on findings of epidemiological studies.

Required Reading

Recommended Reading

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

Assessment Assignment, tutorial topic questions and test.
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 on 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 this 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.

RBM3264 ADVANCED NERVE AND MUSCLE PHYSIOLOGY
Campus Footscray Park
Prerequisite(s) RBM2800 Cardiorespiratory and Renal Physiology or equivalent
Content The aim of the subject is to examine in detail the mechanisms of nerve and muscle function. Topics include: physico-chemical principles underlying nerve and muscle function; behaviour of excitable cells; mechanisms of muscle contraction; neural influences over muscles and muscle fibre types; muscle fibre recruitment; metabolic processes in active muscle; neuromuscular fatigue; co-ordinating motor activity, and diseases of the nervous and muscular systems. Research techniques in nerve and muscle physiology.
Required Reading Nerve and muscle physiology section of any basic physiology textbook.
Class Contact Two hours of lectures, one one-hour tutorial and three hours of practical work each week for one semester.
Assessment Based on laboratory reports, tutorial assignments and an end-of-semester examination.

RBM3361 OCCUPATIONAL HEALTH AND SAFETY PROJECT
Campus St Albans
Prerequisite(s) RBM2361 Safety Practice OR Completion of level 2 Biomedical Sciences (or equivalent)
Content This subject is based on setting up, conducting and successfully completing, an occupational health and safety project. Methodologies in ergonomics, incident investigation, occupational hygiene, risk analysis and management, system safety etc., are demonstrated through problem formulation and problem definition, project management, publication of project outcomes.
Class Contact One hour lecture and case study tutorial equivalents delivered online per week for the first half of a semester. The final half of the semester will concern student completion of their project reports.
Assessment Based on tutorial topic questions assignments and a project report (50%).

RBM3462 WORKPLACE PLACEMENT B
Campus St Albans
Prerequisites RBM2361 Safety Practice
Co-requisites Learning Outcomes The outcomes from studying this unit will be that students demonstrate their understanding of OHS inspections and audits in managing occupational health and safety systems. Students 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 Placement A, in industry(ies).
Class Contact Attend for a minimum of 84 hours in a designated workplace(s).
Assessment P3, I2, 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 Phyporpharmaceutics  
Content Fundamental 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.  
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 55% 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.  
Class Contact Six hours per week for one semester comprising three hours of lectures and three hours of practical.  
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.  
Class Contact Four hours per week comprising two one hour lectures and two one hour tutorial/session for one semester.  
Assessment One essay, 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.
SCHOOL OF BIOMEDICAL SCIENCES

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 via the media. A critical understanding will be developed of the ways in which medical 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) RBM3550 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.
Required Reading  Roitt, I.M., Brostoff, J. and Male, D.K. 1993, Immunology, 3rd edn, Mosby, St Louis.
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.
Class Contact  Five hours per week over one semester based on two hours of lecture, one hour of tutorial and two hours of practical sessions.
Assessment  Assignment 20%; practical reports 35%; end of semester examination 45%.

RBM3810 WELLNESS 1
Campus St Albans
Prerequisite(s) RBM2530Pathophysiology 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.

67
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 - energy metabolism dysfunction, 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 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%.

---

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 labased 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 toxicity 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 contaminate 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 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, psychoactive 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.

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

Class Contact
Contact Hours Six hours per week equivalent for one semester course, 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: assignment and clinical examination 15%, 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 principles 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 on 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 and western clinical specialties and diagnostic imaging 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 CM clinical specialties. Social, cultural and interpersonal factors that need to be considered in the clinical physical examination, and best practice western communications strategies that mentally prepare patients for clinical laboratory tests and minor medical procedures.

Required Reading

Recommended Reading

Delfer’s guide to diagnostic and laboratory tests. Canada: Thompson

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

Assessment Practice 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.

RBM3950 NUTRITIONAL THERAPY IN PRACTICE 1 Campus St Albans 
Prerequisite(s) HHH0021 Counselling Skills for Natural Therapies. RBM2540 Pathophysiology 2
Content Nutritional treatment for patients at critical life stages; managing patients with challenging nutritional and behavioural characteristics, eg addiction, non-compliance, aggression, eating disorders, vulnerable client groups; ethical dilemmas in clinical practice, patient record keeping.
Class Contact Minimum of 90 hours supervised clinical practice.
Assessment Examination (3 hours), 50%; case history, 50%.

RBM3955 NUTRITIONAL THERAPY IN PRACTICE 2 Campus St Albans 
Prerequisite(s) RBM3850 Nutritional Therapy in Practice 1; RBM3850 Nutritional Therapeutics C. RBM2540 Pathophysiology 2
Content Nutritional treatment for patients at critical life stages, managing patients with challenging nutritional and behavioural characteristics, eg addiction, non-compliance, aggression, eating disorders, vulnerable client groups; ethical dilemmas in clinical practice; patient record keeping.
Class Contact Minimum of 90 hours supervised clinical practice.
Assessment Examination (3 hours), 50%; case 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; comparison of qualitative and quantitative paradigms; role of audit in monitoring and evaluation of clinical work; social science research methods.
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.
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 planning.
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 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 (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. 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 Alburns

**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 disease problems.
2. Distinguish amongst western and Chinese medical treatment and management regimes in terms of the diagnosis of gastrointestinal, renal, urogenital, 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 typically 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 otoscope, 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 functional tests of, and accompany 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, dermatology 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. An understanding of advanced pathophysiology 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.


**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 Alburns

**Prerequisite(s)** RBM4923 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 pathophysiology 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.


**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 3 times more than the stipulated class contact hours. This unit may be delivered in its entirety in burst mode to allow students the opportunity to undertake their VU-approved final clinical internship.

**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 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.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

RB5510 NEUROL AND NEUROMUSCULAR DIS FOR EXE REHAB
Campus Footscray Park
Prerequisite(s) HPG5041 Functional Anatomy or equivalent, HPG5042 Musculo-Skeletal 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 (cerebro-vascular accident); neurological and neuromuscular deficits; (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.


Learning Outcomes Demonstrated knowledge of the roles of macro and micronutrients, their altered requirements in various pathologies, and appropriate dietary sources. Demonstrated knowledge of appropriate dietary patterns suitable for patients with various conditions and in rehabilitation. Ability to recognise rehabilitation patients requiring referral to nutritional support services.

Content Food components, Nutritional assessment, Healthy eating patterns, Sports nutrition. Role of nutrition in: Cardiovascular disease; Diabetes, Obesity, Neuropathy, Musculoskeletal conditions; Mental illness, Chronic obstructive airways disease. Treatment aspects of these conditions. Fad diets.


Class Contact Two hours lecture or equivalent for one semester.
Assessment case studies (x 3) each approx. 2000 words, 100 % Supplementary assessment will only be offered if all assessable components have been submitted, and a mark of 40-49% is achieved in all assessable components.

RB58001 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/ResearchResearchTraining/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/PDProcessAndGuidelines/

RB58002 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/ResearchResearchTraining/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/PDProcessAndGuidelines/

RB58011 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/ResearchResearchTraining/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/PDProcessAndGuidelines/

RB58012 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/ResearchResearchTraining/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/PDProcessAndGuidelines/

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 undergraduate and postgraduate courses offered by the School of Computer Science and Mathematics in 2007. 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

Ordinary 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.

Advanced Standing
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 advanced standing provided they meet 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 Name</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Pre 2005 To</th>
<th>Full Fee</th>
<th>From 2005 To</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>RCA1010</td>
<td>INTRODUCTORY AVIATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></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>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM1311</td>
<td>PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM1711</td>
<td>MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></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>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM1312</td>
<td>PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM1713</td>
<td>DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA1020</td>
<td>BASIC AERONAUTICAL KNOWLEDGE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>RCM2020</td>
<td>METEOROLOGY AND HUMAN FATORS FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2030</td>
<td>NAVIGATION AND FLIGHT AND AIR LAW FOR THE CPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></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>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA1021</td>
<td>DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>ACE3145</td>
<td>CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA3010</td>
<td>INSTRUMENT RATING (IREX)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA3030</td>
<td>METEOROLOGY AND HUMAN FATORS FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2040</td>
<td>FLIGHT PLANNING FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA3050</td>
<td>NAVIGATION AND AIR LAW FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA3060</td>
<td>AERODYNAMICS AND AIRCRAFT SYSTEMS FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCA3070</td>
<td>PERFORMANCE AND LOADING FOR THE ATPL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computing Electives</td>
<td>RCA2111</td>
<td>DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2112</td>
<td>OPERATING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2213</td>
<td>COMPUTER GRAPHICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2311</td>
<td>OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2312</td>
<td>SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2810</td>
<td>ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2930</td>
<td>WEB TECHNOLOGIES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM3960</td>
<td>INTERNET SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 (I)
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</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>BAO1101 ACCOUNTING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>or</td>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>or</td>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
</tr>
</tbody>
</table>

*For those doing ACE1145 in Semester One, RCM1614 to be taken over summer semester.

Year 2

<table>
<thead>
<tr>
<th>Year 2</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>One elective from list A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Year 3

<table>
<thead>
<tr>
<th>Year 3</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>RCM3413 FINANCIAL MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3711 COMPUTATIONAL METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>List A</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2315 ADVANCED PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2614 STATISTICAL DATAMINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3112 USER INTERFACE DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3311 OBJECT ORIENTED PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

List B

<table>
<thead>
<tr>
<th>List B</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>RCM3316 ADVANCED MATHEMATICAL TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3613 TIME SERIES ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3615 MULTIVARIATE STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3911 SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

List C

<table>
<thead>
<tr>
<th>List C</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>BAO3307 CORPORATE FINANCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>BAO3403 INVESTMENT AND PORTFOLIO MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM3940 COMPUTATIONAL RISK MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

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
Computer and Mathematical Sciences

Year 1

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credit</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>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>Semester 1</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>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>Communication (if needed) – this replaces RCM1613 in Semester One</td>
<td></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM1115COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1311PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1711MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>RCM1211DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1312PROGRAMMING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1614APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1712MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit</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>RCM2312SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2611LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>RCM2713MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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 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>
</tbody>
</table>

Year 3

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit</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>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCM3001PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>Semester 2</td>
<td>Credit</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005</td>
<td>From 2005</td>
<td>Full Fee</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>-------</td>
<td>---------</td>
<td>----------</td>
<td>-----------</td>
<td>---------</td>
</tr>
<tr>
<td>RCM3002PROJECT 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>
</tbody>
</table>

List A

| RCM2111DATA COMMUNICATIONS AND NETWORKS 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2112OPERATING SYSTEMS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2113MULTIMEDIA SYSTEMS DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2213COMPUTER GRAPHICS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2218DATABASE SYSTEMS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2311OBJECT ORIENTED PROGRAMMING 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2313SOFTWARE DEVELOPMENT | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2315ADVANCED PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2316NETWORK OPERATING SYSTEM ADMINISTRATION | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM2810ADVANCED INTERNET PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM29303D WEB TECHNOLOGIES | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
### FACULTY OF HEALTH, ENGINEERING AND SCIENCE

<table>
<thead>
<tr>
<th>List B</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>RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2511 IMAGE PROCESSING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2614 STATISTICAL DATA MINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

### List C

| RCM3111 DATA COMMUNICATIONS & NETWORKS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3112 USER INTERFACE DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3115 ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3211 DATABASE SYSTEMS 3 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3311 OBJECT ORIENTED PROGRAMMING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3312 INTELLIGENT SYSTEMS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3313 SOFTWARE ENGINEERING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3820 INTERNET COMPUTING USING XML | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3950 INTERNET DATA MANAGEMENT | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3960 INTERNET SECURITY | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3970 COMPUTER GRAPHICS FOR GAME PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

### List D

| RCM3316 ADVANCED MATHEMATICAL TECHNIQUES | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3413 FINANCIAL MODELLING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3511 IMAGE PROCESSING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3611 REGRESSION ANALYSIS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3613 TIME SERIES ANALYSIS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3615 MULTIVARIATE STATISTICS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3617 QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3711 COMPUTATIONAL METHODS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3911 SIMULATION | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM3940 COMPUTATIONAL RISK MODELLING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

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

#### Year 1

<table>
<thead>
<tr>
<th>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>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Students can complete ACE1145 or RCM1613 in semester 1.
| Semester 2 | RCM1614 APPLIED STATISTICS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM1211 DATABASE SYSTEMS 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM1312 PROGRAMMING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM1313 APPLIED STATISTICS 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| RCM1713 DISCRETE MATHEMATICS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

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 | $712 | $890 | $1,584 |

Three electives from lists A, B or C below under SBIA (each worth 12 credit points) 36 credit points

#### Semester 2

Four 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 | $500 | $625 | $1,430 |

RCM3001 PROJECT 1 | 12 | 0.1250 | 2 | $712 | $890 | $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 | $712 | $890 | $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 | $712 | $890 | $1,584 |

RCM2112 OPERATING SYSTEMS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2113 MULTIMEDIA SYSTEMS DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2213 COMPUTER GRAPHICS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2218 DATABASE SYSTEMS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2311 OBJECT ORIENTED PROGRAMMING 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2313 SOFTWARE DEVELOPMENT | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2315 ADVANCED PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2810 ADVANCED INTERNET PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2930 3D WEB TECHNOLOGIES | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

### List B

RCM3111 DATA COMMUNICATIONS & NETWORKS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3112 USER INTERFACE DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3115 ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3211 DATABASE SYSTEMS 3 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3311 OBJECT ORIENTED PROGRAMMING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3312 INTELLIGENT SYSTEMS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3313 SOFTWARE ENGINEERING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3820 INTERNET COMPUTING USING XML | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3950 INTERNET DATA MANAGEMENT | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3960 INTERNET SECURITY | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3970 COMPUTER GRAPHICS FOR GAME PROGRAMMING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

### List C

RCM1712 MATHEMATICAL FOUNDATIONS 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2511 IMAGE PROCESSING 1 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2611 LINEAR STATISTICAL MODELS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2612 FORECASTING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2614 STATISTICAL DATAMINING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2713 MODELLING FOR DECISION MAKING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2911 LINEAR OPTIMISATION MODELLING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2912 PROJECT SCHEDULING | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM2915 STOCHASTIC AND COMBINATORIAL OPTIMISATION | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3511 IMAGE PROCESSING 2 | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3611 REGRESSION ANALYSIS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3613 TIME SERIES ANALYSIS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3614 MULTIVARIATE STATISTICS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3617 QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3711 COMPUTATIONAL METHODS | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

RCM3911 SIMULATION | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

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.
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>Subject</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$500</td>
</tr>
<tr>
<td></td>
<td>RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1311 PROGRAMMING 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1312 PROGRAMMING 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>or RCM1614 APPLIED STATISTICS 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1713 DISCRETE MATHEMATICS</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<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>
</tr>
<tr>
<td>Year 2</td>
<td>RCM2112 OPERATING SYSTEMS</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2311 OBJECT ORIENTED PROGRAMMING 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2312 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM2111 DATA COMMUNICATIONS AND NETWORKS 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2313 SOFTWARE DEVELOPMENT</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 3</td>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.125</td>
<td>1</td>
<td>$500</td>
</tr>
<tr>
<td></td>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3820 INTERNET COMPUTING USING XML</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCM3002 PROJECT 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3960 INTERNET SECURITY</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3950 INTERNET DATA MANAGEMENT</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>One subject from lists A, B or C below (each worth 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List A</td>
<td>RCM2113 MULTIMEDIA SYSTEMS DESIGN</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2213 COMPUTER GRAPHICS</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2218 DATABASE SYSTEMS 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2315 ADVANCED PROGRAMMING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2900 3D WEB TECHNOLOGIES</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>List B</td>
<td>RCM3111 DATA COMMUNICATIONS &amp; NETWORKS 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3112 USER INTERFACE DESIGN</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3115 ARCHITECTURES FOR ENTERPRISE WIDE COMPUTING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3211 DATABASE SYSTEMS 3</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3311 OBJECT ORIENTED PROGRAMMING 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3312 INTELLIGENT SYSTEMS</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3313 SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM3970 COMPUTER GRAPHICS FOR GAME PROGRAMMING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>List C</td>
<td>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2511 IMAGE PROCESSING 1</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2611 LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2614 STATISTICAL DATAMINING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</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

Year 1

<table>
<thead>
<tr>
<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></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
</tbody>
</table>

ACE1145 CSM ENGLISH LANGUAGE AND COMMUNICATION 12 0.1250 1 $500 $625 $1,430
(RCM1613 in Semester One)

RCM1115 COMPUTER SYSTEMS AND ARCHITECTURE 12 0.1250 2 $712 $890 $1,584

RCM1311 PROGRAMMING 1 12 0.1250 2 $712 $890 $1,584

RCM1613 APPLIED STATISTICS 1 12 0.1250 2 $712 $890 $1,584

RCM1711 MATHEMATICAL FOUNDATIONS 1 12 0.1250 2 $712 $890 $1,584

RCM1312 PROGRAMMING 2 12 0.1250 2 $712 $890 $1,584

RCM1114 INTRODUCTION TO COMPUTING AND THE INTERNET 12 0.1250 2 $712 $890 $1,584

RCM1614 APPLIED STATISTICS 2 12 0.1250 2 $712 $890 $1,584

RCM1211 DATABASE SYSTEMS 1 12 0.1250 2 $712 $890 $1,584

RCM1713 DISCRETE MATHEMATICS 12 0.1250 2 $712 $890 $1,584

RCM1613 APPLIED STATISTICS 1 12 0.1250 2 $712 $890 $1,584

RCM2112 OPERATING SYSTEMS 12 0.1250 2 $712 $890 $1,584

RCM2311 OBJECT ORIENTED PROGRAMMING 1 12 0.1250 2 $712 $890 $1,584

RCM2312 SOFTWARE ENGINEERING 1 12 0.1250 2 $712 $890 $1,584

One subject from lists A, B or C below (each worth 12 credit points)

RCM2111 DATA COMMUNICATIONS AND NETWORKS 1 12 0.1250 2 $712 $890 $1,584

RCM2218 DATABASE SYSTEMS 2 12 0.1250 2 $712 $890 $1,584

RCM2313 SOFTWARE DEVELOPMENT 12 0.1250 2 $712 $890 $1,584

One subject from lists A, B or C below (each worth 12 credit points)

Year 3

<table>
<thead>
<tr>
<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></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
</tbody>
</table>

ACE3145 CSM PROFESSIONAL COMMUNICATION 12 0.1250 1 $500 $625 $1,430

RCM3001 PROJECT 1 12 0.1250 2 $712 $890 $1,584

RCM3314 OBJECT ORIENTED ANALYSIS AND DESIGN 12 0.1250 2 $712 $890 $1,584

RCM3002 PROJECT 2 12 0.1250 2 $712 $890 $1,584

RCM3312 INTELLIGENT SYSTEMS 12 0.1250 2 $712 $890 $1,584

RCM3313 SOFTWARE ENGINEERING 2 12 0.1250 2 $712 $890 $1,584

One subject from lists A, B or C below (each worth 12 credit points)

List A

RCM2113 MULTIMEDIA SYSTEMS DESIGN 12 0.1250 2 $712 $890 $1,584

RCM2213 COMPUTER GRAPHICS 12 0.1250 2 $712 $890 $1,584

RCM2315 ADVANCED PROGRAMMING 12 0.1250 2 $712 $890 $1,584

RCM2316 NETWORK OPERATING SYSTEM ADMINISTRATION 12 0.1250 2 $712 $890 $1,584
### Bachelor of Science in Information Technology

**List B**

<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>RCM2810 ADVANCED INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2903 3D WEB TECHNOLOGIES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

**List C**

<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>RCM1712 MATHEMATICAL FOUNDATIONS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2511 IMAGE PROCESSING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2611 LINEAR STATISTICAL MODELS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2612 FORECASTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2614 STATISTICAL DATA MINING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2712 MATHEMATICS OF CONTINUOUS PROCESSES A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2713 MODELLING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2915 STOCHASTIC AND COMBINATORIAL OPTIMISATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3511 IMAGE PROCESSING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3611 REGRESSION ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3613 TIME SERIES ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3615 MULTIVARIATE STATISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3617 QUALITY IMPROVEMENT AND EXPERIMENTAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3711 COMPUTATIONAL METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3720 CRYPTOGRAPHY, COMPUTER AND NETWORK SECURITY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3911 SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

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.

### Bachelor of Science in Logistics Analysis

**Course Code:** SBLA

**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 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, as follows: International English Testing System – a minimum overall test score of 6.0 and no individual band score of less than 5.5.

**Course Structure**

<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>BAO1101 ACCOUNTING FOR DECISION MAKING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BHO1171 INTRODUCTION TO MARKETING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>ACE3145 CSM PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RCM1613 APPLIED STATISTICS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1211 DATABASE SYSTEMS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM1711 MATHEMATICAL FOUNDATIONS 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2917 LOGISTICS TECHNOLOGY AND SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2911 LINEAR OPTIMISATION MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2915 STOCHASTIC AND COMBINATORIAL OPTIMISATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2912 PROJECT SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3001 PROJECT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM2914 PROJECT AND INVENTORY ANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
SCHOOL OF COMPUTER SCIENCE AND MATHEMATICS

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

<table>
<thead>
<tr>
<th>Subject</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>BEO4123 GLOBAL LOGISTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BEO3203 SUPPLY AND VALUE NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM3021 LOGISTICS ANALYSIS AND SOLUTIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

**Electives**

8 Electives Approved by Course Coordinator.

**GRADUATE DIPLOMA IN COMPUTER AND MATHEMATICAL SCIENCES (I)**

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**

Entry 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.

**Progression Regulations**

The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:

(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.

(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

**Unsatisfactory Progress**

These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.

(i) The following shall constitute unsatisfactory progress:

(a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
(b) failure in any subject twice,
(c) transgression of a conditional enrolment stipulation and agreement.

(ii) Where a student's progress is unsatisfactory, the Departmental Academic Progress Committee may recommend the following:

(a) a restricted and conditional enrolment only be approved,
(b) exclusion from the course.

(iii) A student who wishes to appeal against the Department's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.

(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.
GRADUATE DIPLOMA IN COMPUTER SCIENCE (I)
Course Code: SGCS

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
Entry 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.

<table>
<thead>
<tr>
<th>Computer Science Subjects</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>RCM5800 OBJECT ORIENTED PROGRAMMING GD1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5805 COMMUNICATION AND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5821 INTRODUCTION TO MULTIMEDIA SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>2 x Approved Electives in Computer Science 2 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives 2 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mathematical Science Subjects</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>RCM5800 OBJECT ORIENTED PROGRAMMING GD1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5802 INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5805 COMMUNICATION AND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>2 x Approved Electives in Mathematics 1 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives in Mathematics 2 24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 x Approved Electives in CS 2 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Progression Regulations
The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:

(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.
(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

Unsatisfactory Progress
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.

(i) The following shall constitute unsatisfactory progress:

(a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
(b) failure in any subject twice,
(c) transgression of a conditional enrolment stipulation and agreement.

(ii) Where a student's progress is unsatisfactory, the Departmental Academic Progress Committee may recommend the following:

(a) a restricted and conditional enrolment only be approved,
(b) exclusion from the course.

(iii) A student who wishes to appeal against the Department's written recommendation is required to do so in accordance with the University's Statute. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.

(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

GRADUATE DIPLOMA IN MULTIMEDIA INFORMATION NETWORKING (I)
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:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Subject Description</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Full Fee (AU$)</th>
<th>From 2005 Full Fee (AU$)</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>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5802</td>
<td>INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5805</td>
<td>COMMUNICATION AND NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5821</td>
<td>INTRODUCTION TO MULTIMEDIA SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5807</td>
<td>ADVANCED INFORMATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5820</td>
<td>NETWORK OPERATING SYSTEMS ADMINISTRATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5822</td>
<td>NETWORK MULTIMEDIA SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM5824</td>
<td>OBJECT ORIENTED PROGRAMMING GD2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Progression Regulations
The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:
(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.
(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

Unsatisfactory Progress
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.
(i) The following shall constitute unsatisfactory progress:
   (a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study;
   (b) failure in any subject twice;
   (c) transgression of a conditional enrolment stipulation and agreement.
(ii) Where a student's progress is unsatisfactory, the School Academic Progress Committee may recommend the following:
   (a) a restricted and conditional enrolment only be approved;
   (b) exclusion from the course.
(iii) A student who wishes to appeal against the School's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.
(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

GRADUATE DIPLOMA IN SOFTWARE ENGINEERING (I)
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.

Course Structure
To complete the Graduate Diploma in Software Engineering requires the successful completion of four core subjects and four elective subjects.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Full Fee (AU$)</th>
<th>From 2005 Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCM6822</td>
<td>INTERNET PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>RCM6844</td>
<td>SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>AND TWO x Approved Electives in Computer Science(12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 Full Fee (AU$)</td>
<td>From 2005 Full Fee (AU$)</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
<td>-------</td>
<td>---------</td>
<td>-------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>RCM5824</td>
<td>OBJECT ORIENTED PROGRAMMING GD2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>RCM5841</td>
<td>SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td></td>
<td>AND TWO x Approved Electives in Computer Science (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Progression Regulations
The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:
(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.
(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre requisite subjects.

Unsatisfactory Progress
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.
(i) The following shall constitute unsatisfactory progress:
   (a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
   (b) failure in any subject twice,
   (c) transgression of a conditional enrolment stipulation and agreement.
(ii) Where a student's progress is unsatisfactory, the Departmental Academic Progress Committee may recommend the following:
   (a) a restricted and conditional enrolment only be approved,
   (b) exclusion from the course.
(iii) A student who wishes to appeal against the Department's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.
(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

BACHELOR OF SCIENCE (HONOURS) IN COMPUTER AND MATHEMATICAL SCIENCES (I)
Course Code: SHCM

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>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></td>
<td></td>
<td>(AUS) (AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>RCM6106 THESIS (2 UNITS)</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
</tr>
<tr>
<td>AND TWO approved Maths/Stats electives (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6107 THESIS (2 UNITS)</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
</tr>
<tr>
<td>RCM6827 RESEARCH PERSPECTIVES IN COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>AND ONE approved elective (12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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>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></td>
<td></td>
<td>(AUS) (AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>RCM6106 THESIS (2 UNITS)</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
</tr>
<tr>
<td>AND ONE approved Computer and Science elective (1 x 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6827 RESEARCH PERSPECTIVES IN COMPUTER SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>2 approved Computer and Science electives – (2 x 12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MASTER OF SCIENCE IN COMPUTER AND MATHEMATICAL SCIENCES
Course Code: SMCM

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

<table>
<thead>
<tr>
<th>Year 1</th>
<th></th>
<th></th>
<th></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>
</tr>
<tr>
<td>4 x Approved Electives in Computer Science 2 48</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
</tr>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>2 x Approved Electives 2 24</th>
</tr>
</thead>
</table>

Mathematical Science Subjects

<table>
<thead>
<tr>
<th>Year 1</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x Approved Electives in Computer Science 1 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives in Mathematics 1 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives in Computer Science 2 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives in Mathematics 2 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x Approved Electives in Computer Science 1 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x Approved Electives in Mathematics 1 24</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RCM6103 THESIS (4 UNITS) 48 0.5000 2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>RCM6102 THESIS (2 UNITS) 24 0.2500 2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>2 x Approved Electives 1 24</td>
<td></td>
<td></td>
<td></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.

Progression Regulations

The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:

(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.

(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

 Unsatisfactory Progress

These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.

(i) The following shall constitute unsatisfactory progress:

(a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,

(b) failure in any subject twice,

(c) transgression of a conditional enrolment stipulation and agreement.

(ii) Where a student's progress is unsatisfactory, the School's Academic Progress Committee may recommend the following:

(a) a restricted and conditional enrolment only be approved,

(b) exclusion from the course.

(iii) A student who wishes to appeal against the School's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.

(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</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>1</td>
<td>1</td>
<td>4 x Approved Electives in Computer Science</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4 x Approved Electives in Computer Science</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>RCM6103 THESIS (4 UNITS)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>RCM6102 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

Elective List

RCM5601 FORECASTING 12 0.1250 2 $712 $890 $1,584
RCM5602 QUALITY MANAGEMENT AND STATISTICS 12 0.1250 2 $712 $890 $1,584
RCM5803 DATA STRUCTURES AND PROGRAMMING 12 0.1250 2 $712 $890 $1,584
RCM6105 THESIS (1 UNIT) 12 0.1250 2 $712 $890 $1,584
RCM6606 TIME SERIES ANALYSIS 12 0.1250 2 $712 $890 $1,584
RCM6607 STATISTICAL COMPUTING 12 0.1250 2 $712 $890 $1,584
RCM6819 USER INTERFACE DESIGN 12 0.1250 2 $712 $890 $1,584
RCM6821 DECISION SUPPORT TECHNOLOGY 12 0.1250 2 $712 $890 $1,584
RCM6822 INTERNET PROGRAMMING 12 0.1250 2 $712 $890 $1,584
RCM5814 COMPUTER GRAPHICS 12 0.1250 2 $712 $890 $1,584
RCM6820 DISTRIBUTED SYSTEMS 12 0.1250 2 $712 $890 $1,584
RCM6823 DATABASE DESIGN, MANAGEMENT AND ADMINISTRATION 12 0.1250 2 $712 $890 $1,584
RCM6825 MULTIMEDIA SYSTEMS DESIGN AND DEVELOPMENT 12 0.1250 2 $712 $890 $1,584
RCM6902 MATHEMATICAL PROGRAMMING 1 12 0.1250 2 $712 $890 $1,584
RCM6904 SIMULATION 12 0.1250 2 $712 $890 $1,584
RCM6905 SEQUENCING AND SCHEDULING 12 0.1250 2 $712 $890 $1,584
RCM6906 OPTIMISATION TECHNIQUES 12 0.1250 2 $712 $890 $1,584

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.

Progression Regulations
The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:
(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.
(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

Unsatisfactory Progress
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.

(i) The following shall constitute unsatisfactory progress:
(a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
(b) failure in any subject twice,
(c) transgression of a conditional enrolment stipulation and agreement.

(ii) Where a student's progress is unsatisfactory, the School's Academic Progress Committee may recommend the following:
(a) a restricted and conditional enrolment only be approved,
(b) exclusion from the course.

(iii) A student who wishes to appeal against the School's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.

(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

MASTER OF SCIENCE IN LOGISTICS SYSTEMS AND SUPPORT

Course Code: SMLS

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 has the most dynamic trend. 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 technical support 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/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>Credit Points</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>BEO5306 SUPPLY NETWORKS AND LOGISTICS STRATEGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6021LOGISTICS SOLUTIONS AND SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6905 SEQUENCING AND SCHEDULING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6906 OPTIMISATION TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BEO6617 BUSINESS RISK AND PLANNING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6601 RELIABILITY AND MAINTENANCE (NOT OFFERED IN 2006)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5520 ORGANISATION ANALYSIS AND BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6607 STATISTICAL COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6102 THESIS (2 UNITS)</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>Or</td>
<td>RCM6104 THESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RCM6105 THESIS (1 UNIT)</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

**MASTER 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>Year 1 Semester 1</th>
<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>RCM6844 SOFTWARE ENGINEERING 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6710 INTERNET DATA MANAGEMENT 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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>
<td></td>
</tr>
<tr>
<td>RCM6841 SOFTWARE ENGINEERING 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6843 SOFTWARE ENGINEERING PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6702 INTERNET DATA REPRESENTATION 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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</th>
<th>From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND ONE Approved Electives (12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Year 2

<table>
<thead>
<tr>
<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></td>
<td></td>
<td>(AU$) (AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<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>$712</td>
</tr>
<tr>
<td>RCM6842 ADVANCED TOPICS IN SOFTWARE ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>RCM6845 OBJECT ORIENTED TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>AND One Approved Elective (12 credit points)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 2</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>$1,424</td>
</tr>
<tr>
<td>AND TWO Approved Electives (12 credit points each)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR RCM6103 THESIS (4 UNITS)</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
</tr>
</tbody>
</table>

Progression Regulations
The School's Academic Committees (Examiners' Meetings) will, at the end of each semester, consider the results and progress of all students enrolled in the course.

Progression is based on the following guidelines:
(i) Where any subject must be repeated, enrolment in that subject must be at the first opportunity following the initial failure.
(ii) Students will not normally be allowed to enrol in any subject for which at least a H3 grade has not been attained in any of the pre-requisite subjects.

 Unsatisfactory Progress
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress. The following regulations apply to both full time and part time students.
(i) The following shall constitute unsatisfactory progress:
   (a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
   (b) failure in any subject twice,
   (c) transgression of a conditional enrolment stipulation and agreement.
(ii) Where a student's progress is unsatisfactory, the School's Academic Progress Committee may recommend the following:
   (a) a restricted and conditional enrolment only be approved,
   (b) exclusion from the course.
(iii) A student who wishes to appeal against the School's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.
(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

MASTER OF SCIENCE (RESEARCH)
Course Code: SRHC, SRLC, SROT

Course Structure

<table>
<thead>
<tr>
<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></td>
<td></td>
<td>(AU$) (AU$)</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>$2,847</td>
</tr>
<tr>
<td>RCM8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
</tr>
<tr>
<td>RCM8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
</tr>
<tr>
<td>RCM8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</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 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

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 as 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 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.

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 One 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 'GSYA 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) 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 theory 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 theory 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)
Content Aircraft performance theory, and loading theory sufficient to pass the Air Transport Pilot's Licence theory subject 'ATPL Performance and Loading' examined by the Civil Aviation Safety Authority.
Class Contact 1 x three hour workshop per week for one semester or equivalent.
Assessment Examination as required by the Civil Aviation Safety Authority.

RCA1114 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%.

RCA1115 COMPUTER SYSTEMS AND ARCHITECTURE
Campus Footscray Park, Hong Kong
Prerequisite(s) Nil
Required Reading Nil.
Recommended Reading Brooksheer, 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%.

RCA1211 DATABASE SYSTEMS 1
Campus Footscray Park, Hong Kong
Prerequisite(s) RCA1115 Computer Systems and Architecture; RCA1311 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%.

RCA1311 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. Arrays, vectors and string data types. File I/O. Inheritance, exceptions, graphical user interface.
Recommended Reading: Lewis, J. and Loftus, W., 2003, Java Software Solutions, 3rd edn, Addison-Wesley.
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, 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.
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%.

RCM1614 APPLIED STATISTICS 2
Campus: Footscray Park, Hong Kong
Prerequisite(s): RCM1613 Applied Statistics 1.
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.
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 SCM1712 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% midterm test, 70% final examination.

RCM1713 DISCRETE MATHEMATICS
Campus: Footscray Park, Hong Kong
Prerequisite(s): RCM1711 Mathematical Foundations 1.
Content: Algorithmic techniques and asymptotic analysis, O, o and q notation. Algorithm design – greedy algorithms, divide and conquer, dynamic programming, backtracking, branch and bound heuristics. Comparisons and applications. 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.
Required Reading: Nil.
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, 80%; tests, 20%.

RCM2111 DATA COMMUNICATIONS AND NETWORKS 1
Campus: Footscray Park, Hong Kong, Malaysia, Singapore
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, RCM1115 Computer systems and Architecture
Required Reading To be advised by lecturer.
recommended reading
commit and rollback, concurrency control, locking, scheduling, and concept, ACID properties, specification. Transaction processing:

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

class contact
two-hour lecture and two-hour laboratory per week.

assessment
Final examination, 80%; tests, 20%.

rcm2311 object oriented programming 1

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

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

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.

RCM2315 ADVANCED PROGRAMMING

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

class contact
four hours per week for one semester comprising of two one hour lectures and one hour laboratory and one hour tutorial.

assessment
Final examination, 80%; laboratory work 20%.

RCM2321 MATHEMATICS OF CONTINUOUS PROCESSES B

class contact
four hours per week for one semester, comprising two one-hour lectures and one one-hour laboratory/tutorial.

assessment
Final examination, 80%; assignments: 20%.

Recommended Reading

Required Reading

Recommended Reading

Class Contact
Two one-hour lectures and two one-hour laboratory for one semester.

Assessment
Laboratory, 10%; Two assignments, 30%; Final examination, 60%.

RCM2218 DATABASE SYSTEMS 2

Class Contact
Two-hour lecture and two-hour laboratory per week.

Assessment
Final examination, 80%; tests, 20%.

RCM2311 OBJECT ORIENTED PROGRAMMING 1

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%.

RCM2321 SOFTWARE ENGINEERING 1

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%.
RM2511 IMAGE PROCESSING 1
Campus Footscray Park, Sydney, Malaysia
Prerequisite(s) RM114 Introduction to Computing and the Internet, and one of RCM1711 or RCM1712.
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%.

RM2611 LINEAR STATISTICAL MODELS
Campus Footscray Park
Prerequisite(s) RM1514 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%.

RM2612 FORECASTING
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RM1514
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%.

RM2614 STATISTICAL DATA MINING
Campus Footscray Park, Hong Kong, Malaysia, Singapore
Prerequisite(s) RCM1614.
Content Statistical data mining 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%.

RM2712 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.
Required Reading Nil.
Class Contact 2 x 1hr lecture and 2 x 1 hr tutorial for one semester.
Assessment 15% mid-semester test (1 hour) 15% project work 70% end of semester examination (3 hours).

RM2713 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 continual modelling and discrete/continuous combinations with examples of general interest in a variety of fields.
Class Contact Two hours per week for one semester.
Assessment Final examination, 80%; assignments, 20%.

RM2810 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 scripted as examples of embedded objects; how to use XHTML to initialize parameters of an an applet, and to us 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 runtime 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 The five parts of D.R. Watson’s interactive hypertexts on Internet Programming, Powell, T. and Schneider, F., 2001 or later, JavaScript: The Complete Reference, McGraw-Hill.
RCM2911 LINEAR OPTIMISATION MODELLING
Campus Footscray Park
Prerequisite(s) Nil
Content Introduction to linear programming; Mathematical models; Graphical solution; Maximisation and minimisation problems; Spreadsheet modelling; Sensitivity analysis for LP; Applications of LP. Transportation problem. Assignment & Trans-shipping. Simplex method, Hungarian method. Pure and mixed integer linear programming; Knapsack problems.
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 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
Required Reading Lecture notes provided by lecturer.
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 costs and benefits of a project are, and how alternative project proposals are evaluated. This subject also teaches various inventory cost components, models for Economic Evaluation.
Content Introduction to linear programming; Mathematical 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 Lecture notes provided by lecturer.
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 EVSI. 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. Queuing Theory: Basic components of a queuing model, arrival and service for some distributions; operating characteristics of a queuing system; multiple server models; no waiting time and finite calling population; Economic Analysis; Spreadsheet Analysis.
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 hours 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-requisite(s) Nil
Learning Outcomes After completing the subject, a student is expected to be 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 logistic system.
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) RCM1312
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 Lecture notes provided by the lecturer.

**Recommended Reading**

**Required Reading**

Material Handling; Inventory; Procurement. Apply Problem Based Learning to prepare directed towards the analytical aspects of logistics.

All items of assessment must be completed in order for a final result to be obtained in this subject.

**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 workshops.


**Recommended Reading** Handbook of Communication Skills for First Year Students in the Faculty of Science, Engineering and Technology.

**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 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)** RCM2111 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, RCM2318

**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; integrated information 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.

**Required Reading** Linthicum, D, 1997, Guide to Client/Server and Intranet Development, Wiley

**Class Contact** Four hours per week for one semester, comprising of two hours of lectures and two hours of laboratory/tutorial.

**Assessment** Final examination, 70%; tests/assignments, 30%.

**RCM3200 SELECTED TOPICS IN OPEN RES AND STATS**

**Campus** Footscray Park

**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%; assignment and tests, 30%.  

RCM3311 OBJECT ORIENTED PROGRAMMING 2  
Campus Footscray Park, Sydney, Hong Kong, Malaysia  
Prerequisite(s) RCM312 Programming 2; RCM3111 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.  

Recommended Reading Deitel, H. M., and Deitel, P.J., Java How to Program, 6th Ed., Prentice Hall, 2005  

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) RCM312 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) RCM3111 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 approaches 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 incompressible fluid. 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, Peano 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, RCM3112 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 filters 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.  

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%; Assignment and test, 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.
**Recommended Reading** Venables W., & Ripley B. Modern Applied Statistics with S-Plus 3rd Ed. 2001 Springer.

**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.

**Content** Fundamental ‘quality’ and ‘quality management’ issues. Specifications and the loss function. Process capability and statistical process control. An introduction to feedback control. Factorial experiments and fractional factorial designs. Taguchi methods.

**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.

**Recommended Reading** Atkinson, K.E., 1989, An Introduction to Numerical Analysis, John Wiley & Sons.

**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, Australia

**Prerequisite(s)** RCM1711 Mathematical Foundations 1 and RCM1712 Mathematical Foundations 2 or equivalent.


**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** SCMS911 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)** RCM1311, RCM1711


**Recommended Reading** Hull, J.C., 2003, Options, Futures, and Other Derivatives, 5th edn, Prentice Hall.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Class Contact Two hrs of lectures and two hr tutorial/laboratory per week for one semester.
Assessment Assignment, 20%; final examination, 80%.

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.
Class Contact Four hours per week for one semester, comprising one two-hour lecture and one two-hour laboratory/tutorial.
Assessment Laboratory, 15%; Assignments, 35%; midterm 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.
Required Reading Supplied notes.
Class Contact Four hours per week: two lectures and two computer laboratory tutorials.
Assessment two 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 GRAPHS 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, billboardng and motion blur; and hardware procedural shading.
Required Reading Lecture notes provided by lecturer.
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
RCM5601 FORECASTING
Campus Footscray Park, Sydney, Hong Kong, Malaysia
Prerequisite(s) RCM1614 or equivalent
Required Reading Nil.
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
Prerequisite(s) Two undergraduate statistics subjects.
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.
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.

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 algebra 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, tests 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, tests 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.

**Content** Introduction – types of networks, master/slave polling networks, equality networks, circuit switches and packet switched networks, topologies, network structure, costings; layered design of networks and the ISO reference model – protocols, interfaces, communication techniques, multiplexing; public networks in Australia – Datel, DDS, Austpac, etc.; local area networks – transmission media, topologies, access control, comparison of local area network products; PC Networks – servers, workstations, network disks, directory structure, network security, access control and file locking.

**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 laboratory work.

**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.

**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 modeling issues. Database transactions: concept, ACID properties, specificiation. Transaction processing: commit and rollback, concurrency control, locking, scheduling, and recovery. Database application development using embedded SQL.

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

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

**Class Contact** Two-hour lecture and one one-hour laboratory per week.

**Assessment** Final examination, 80%; test, 20%.

**RCM5810 SOFTWARE DEVELOPMENT**

**Campus** Footscray Park

**Prerequisites** RCM5800

**Co-requisites**

**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
- Arrays, 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/tutor.

**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, tests 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.


**Recommended 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.


**Recommended 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 object oriented design techniques, 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 one-hour laboratory.

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 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 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

Prerequisites 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 area of expertise.

RCM6103 THESIS (4 UNITS)
To be completed in one semester

Campus Footscray Park

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 area 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

Prerequisites 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 area of expertise.

RCM6106 THESIS (2 UNITS)
(2nd semester code, thesis to be completed over two semesters)

Campus Footscray Park

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 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 area of expertise.
described in detail, results and conclusions from the study are elaborated, and an extended discussion presented.

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

**Assessment** The thesis will normally be assessed by at least two examiners from an appropriate area of expertise.

**RCM6107 THESIS (2 UNITS)**

(2nd semester code, thesis to be completed over two semesters)

**Campus** Footscray Park

**Prerequisites** 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 to assist students in the preparation 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.

**RCM6501 IMAGE PROCESSING ALGORITHMS**

**Campus** Footscray Park

**Prerequisites(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.


**Required Reading** To be advised by lecturer


**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

**Prerequisites(s)** Nil

**Content** Lecture Program Data manipulations using an appropriate language. What packages are available? Similarities and differences in what they can do. Writing macros or their equivalent. Producing graphical displays. (Including EDA). Statistical modelling. Creating useful output. Working with input from various sources. Using the Bootstrap. Using the Jackknife. Testing assumptions about data distributions. Practical program: laboratory sessions are designed to give students practical experience in using computers for statistical purposes.

**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.


**Recommended Reading**

**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.

**Recommended Reading** Introduction to ASP.NET, Kathleen Kalata, © 2002 Course Technology, 0-619-06321-1.


**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 Campus

**Prerequisites** A year of tertiary mathematics

**Co-requisites**

**Learning Outcomes** At the completion of the subject, students should:

- understand the theoretical algorithms which underlay modern cryptography,
- be able to implement these algorithms in Java,
- understand how a cryptosystem is used as part of a security system,
- recognize the strengths and limitations of cryptography,
- be able to apply public-key or secret-key cryptosystems to a variety of security tasks


**Required Reading** Supplied notes

FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact 3 hours/week: 2 lectures and 1 computer laboratory
Assessment 2 mid semester tests: 10% each (1 hour duration) 1 programming project: 15% final exam: 65% (3 hour duration).

RCM6813 INTERNET SECURITY
Campus Footscray Park
Prerequisites RCM5800 and RCM5802

Co-requisites

Learning Outcomes At the completion of the subject, students should:
• understand the theoretical algorithms which underlay modern network security,
• be able to implement these algorithms in Java,
• understand how a cryptosystem is used as part of a security system,
• recognize the strengths and limitations of cryptography,
• recognize and use appropriate security measures for a variety of security tasks


Required Reading
Supplied notes


Class Contact 3 hours/week: 2 lectures and 1 computer laboratory.
Assessment Two mid-semester tests: 15% each (1 hour duration) Final exam: 70% (3 hour duration).

RCM6814 ENTERPRISE – WIDE COMPUTING
Campus Footscray Park
Prerequisites RCM5800, RCM5802, RCM5805, RCM6822

Co-requisites

Learning Outcomes On 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.


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 will be a level of difficulty appropriate for 30% of the total mark in the subject.

RCM6815 THEORETICAL COMPUTER SCIENCE 1

RCM6819 USER INTERFACE DESIGN
Campus Hong Kong, Footscray Park
Prerequisite(s) RCM6822 Internet Programming


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 Park
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 Inmon 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 Wide World 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) 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 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 Three hours per week for one semester comprising two one-hour lectures and one one-hour laboratory/tutorial.

Assessment Final examination, 80%; assignment/tests, 20%.

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 progressions in 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
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, Introspection, Properties of Beans; Tagging – InetAddress Class, URL Class, URLDecoder Class, URLConnection Class, Sockets, Server Sockets, Datagram Clients/Servers; Servlet overview and architecture, HttpServlet Class, HttpServletRequest Interface, HttpServletResponse Interface, 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.

FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**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.
- Required Reading

**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 practicals and assignment and at least 40% on the final examination, and obtain an overall mark of 50%.

---

**RCM6802 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**

**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.

**Content**

**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**

**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.

---

**RCM8001 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/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research website at the following link:


---

**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 faculty website at the following link:

http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research 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 faculty website at the following link:

http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research 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 faculty website at the following link:

http://www.vu.edu.au/Faculties/HealthEngineeringandScience/ResearchhandResearchTraining/MajorResearchAreas/AssessmentcriteriaandCoreResearchGraduateAttributes can be found on the Office for Postgraduate Research website at the following link:

RMA1001 ENGINEERING MATHEMATICS 1A
Campus Footscray Park, Werribee
Prerequisite(s) Year 12 mathematics or its equivalent
Content Basic algebra, indexed index, log laws, indial 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 $a\cos x+b\sin x$ to single $\sin$ or $\cos$ 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, Proof of 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.
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.

RMA1010 INTRODUCTORY MATHEMATICS
Campus Footscray Park
Prerequisite(s) Nil.
Applications. Statistics and Probability: Introductory probability including independent, mutually exclusive events, conditional probability. Data analysis. Discrete and continuous probability distributions. Special discrete and continuous probability distributions, e.g. binomial, Poisson, geometric, normal distributions.
Required Reading To be advised by lecturer.
Subject Hours 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 pass subject.

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 1
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 (discrete and continuous). 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:

Required Reading Advanced Mathematics for Electrical Engineers Subject Notes, Victoria University.


Class Contact 60 hours of lecture/tutorial per semester.

Assessment Mid-semester test 40% Examination 60%.
SCHOOL OF ELECTRICAL ENGINEERING

Below are details of undergraduate and postgraduate courses offered by the School of Electrical Engineering in 2007. 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 = Semester 1, B subjects = Semester 2

Year 1

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEF1001 ENABLING SCIENCES 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VEF1003 ELECTRICAL FUNDAMENTALS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VEB1001 PBL &amp; ENGINEERING PRACTICE 1A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424 $1,780 $3,168</td>
</tr>
</tbody>
</table>

Semester 2

| VEF1002 ENABLING SCIENCES 1B | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VEF1004 ELECTRICAL FUNDAMENTALS 1B | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VEB1002 PBL & ENGINEERING PRACTICE 1B | 24 | 0.2500 | 2 | $1,424 $1,780 $3,168 |

Year 2

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEF2001 LINEAR SYSTEMS AND MATHEMATICS 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VEF2003 SYSTEMS &amp; APPLICATIONS 2C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VEB2001 PBL &amp; ENGINEERING PRACTICE 2A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424 $1,780 $3,168</td>
</tr>
</tbody>
</table>

Semester 2

| VEF2002 SYSTEMS AND MATHEMATICS 2B | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VEF2004 SYSTEMS & APPLICATIONS 2D | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VEB2002 PBL & ENGINEERING PRACTICE 2B | 24 | 0.2500 | 2 | $1,424 $1,780 $3,168 |

Year 3

Subjects total 2 x 48 Credit Points

*Stream Specialization Subjects A 12 60
*Stream Specialization Subjects B 12 60

| VED3001 ENGINEERING DESIGN & PROJECTS 3A | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VED3002 ENGINEERING DESIGN & PROJECTS 3B | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| 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

Year 4

Subjects total 2 x 48 Credit Points

| VEG4001 PROFESSIONAL ENGINEERING PRACTICE 4A | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VEG4002 PROFESSIONAL ENGINEERING PRACTICE 4B | 12 | 0.1250 | 2 | $712 $890 $1,584 |

*Stream Specialization Subjects A 12 60
*Stream Specialization Subjects B 12 60

| VED4001 ENGINEERING DESIGN & PROJECTS 4A | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| VED4002 ENGINEERING DESIGN & PROJECTS 4B | 12 | 0.1250 | 2 | $712 $890 $1,584 |
| 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.
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 design 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.

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 design 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
**SCHOOL OF ELECTRICAL ENGINEERING**

**Year 1**

Subjects total 2 x 48 Credit Points

<table>
<thead>
<tr>
<th>Semester 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>VEF1001 ENABLING SCIENCES 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEB1001 PBL &amp; ENGINEERING PRACTICE 1A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td>VEF1003 ELECTRICAL FUNDAMENTALS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Semester 2

| VEF1002 ENABLING SCIENCES 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEB1002 PBL & ENGINEERING PRACTICE 1B | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VEF1004 ELECTRICAL FUNDAMENTALS 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

**Year 2**

Subjects total 2 x 48 Credit Points per semester

Semester 1

| RMA1001 ENGINEERING MATHEMATICS 1A | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEB2001 PBL & ENGINEERING PRACTICE 2A | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VEF2003 SYSTEMS & APPLICATIONS 2C | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

Semester 2

| RMA1002 ENGINEERING MATHEMATICS 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEB2001 PBL & ENGINEERING PRACTICE 2A | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VEF2004 SYSTEMS & APPLICATIONS 2D | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

**Year 3**

Stream Subject 12 Credit Points
Stream Subject 12 Credit Points
Stream Subject 12 Credit Points
Stream Subject 12 Credit Points

| VED3001 ENGINEERING DESIGN & PROJECTS 3A | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VED3002 ENGINEERING DESIGN & PROJECTS 3B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

Or

| VED3102 ENGINEERING DESIGN AND PROJECTS 3C | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEG4001 PROFESSIONAL ENGINEERING PRACTICE 4A | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |

Electives (6 or 12 credit points)

Stream Subjects: Students to complete a minimum of three stream subjects.

*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 (I)**

Course Code: EBR

**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 and Prerequisites**

To qualify for admission to the course an applicant must have successfully completed a course of study at year 12 level or equivalent.

**Prerequisites Units 3 and 4**

Mathematical Methods or Specialist Mathematics, with study score of at least 22 in English

**Middle Band Selection**

Re-ranking based on study scores in the full range of year 12 student, with particular attention to pre-requisite studies and other science based studies.

**Admission at Other Levels**

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; 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 or part time equivalent

**Course Structure**

Engineering subject codes commence with "V".

Science subject codes commence with "R".

**Year 1**

<table>
<thead>
<tr>
<th>Semester 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>VEF1001 ENABLING SCIENCES 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEF1003 ELECTRICAL FUNDAMENTALS 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEB1001 PBL &amp; ENGINEERING PRACTICE 1A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
</tbody>
</table>

Semester 2

| VEF1002 ENABLING SCIENCES 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEF1004 ELECTRICAL FUNDAMENTALS 1B | 12 | 0.1250 | 2 | $712 | $890 | $1,584 |
| VEB1002 PBL & ENGINEERING PRACTICE 1B | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |

**Year 2**

<table>
<thead>
<tr>
<th>Semester 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>VEF2001 LINEAR SYSTEMS AND MATHEMATICS 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEF2003 SYSTEMS &amp; APPLICATIONS 2C</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEB2001 PBL &amp; ENGINEERING PRACTICE 2A</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
</tbody>
</table>

Credit Point | EFTSL | SC Band | Pre 2005 From 2005 | Full Fee
24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
Semester 2
VEF2002 SYSTEMS AND MATHEMATICS 2B 12 0.1250 2 $712 $890 $1,584
VEF2004 SYSTEMS & APPLICATIONS 2D 12 0.1250 2 $712 $890 $1,584
VEF2002 PBL & ENGINEERING PRACTICE 2B 24 0.2500 2 $1,424 $1,780 $3,188

Year 3
Semester One
VED3001 ENGINEERING DESIGN & PROJECTS 3A 12 0.1250 2 $712 $890 $1,584
VAM3071 DYNAMICS 12 0.1250 2 $712 $890 $1,584
VAM3031 MECHANICAL ENGINEERING DESIGN 1 12 0.1250 2 $712 $890 $1,584
One Elective from the School of Electrical Engineering Stream A (12 Credit Points total).

Semester Two
VAM3072 MECHANICAL VIBRATIONS 12 0.1250 2 $712 $890 $1,584
VAM3012 SIGNAL ANALYSIS 12 0.1250 2 $712 $890 $1,584
VED3002 ENGINEERING DESIGN & PROJECTS 3B 12 0.1250 2 $712 $890 $1,584
One Elective from the School of Electrical Engineering Stream B (12 Credit Points total).

Year 4
Semester One
VEG4001 PROFESSIONAL ENGINEERING PRACTICE 4A 12 0.1250 2 $712 $890 $1,584
VED4001 ENGINEERING DESIGN & PROJECTS 4A 12 0.1250 2 $712 $890 $1,584
VEA4400 ROBOTICS AND AUTOMATION 6 0.0630 2 $359 $448 $798
Plus an approved elective from the School of Civil and Mechanical Engineering (12 Credit Points).
Plus an approved elective from the School of Electrical Engineering (6 Credit Points).

Semester Two
VEG4002 PROFESSIONAL ENGINEERING PRACTICE 4B 12 0.1250 2 $712 $890 $1,584
VAM4032 MECHANICAL ENGINEERING DESIGN 2 12 0.1250 2 $712 $890 $1,584
VED4002 ENGINEERING DESIGN & PROJECTS 4B 12 0.1250 2 $712 $890 $1,584
VEA4100 COMPUTER VISION AND APPLICATIONS 6 0.0630 2 $359 $448 $798
Plus one approved elective from the School of Electrical Engineering (6 credit points).
Other electives from outside of these Schools
(Subject to approval of Course Co-ordinators)

Assessment
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.

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 (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 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:
- high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
- the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
- 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:
- develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification;
- develop a basic understanding of the device physics, the fabrication process and the testing to the level needed by IC designers;
- develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology;
- develop research skills necessary to obtain specialist knowledge of issues pertinent to integrated circuit design;
- 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 an 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.

### Year 1

#### Core Units

<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>VEH6001 IGL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

And Five of Approved Elective Units of Study

#### Electives

<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>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6020 MINOR PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEH6030 MAJOR PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

*Note: All Special Electives for Chipskills program are to be approved by the Course Directors (RMIT & VU).

Assessment

Assessment will be a combination of written assignments, tests, laboratory work, project work and examinations. Supplementary assessment is not normally available in any unit except at the discretion of the Head of School/Department of the University offering the unit and under exceptional circumstances.

### GRADUATE DIPLOMA IN SYSTEMS AND CONTROL ENGINEERING (I)

**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 the English language as assessed by:

- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 550+, and a Test of Written English score of 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 English Language, as assessed by:

- International English Language Testing System – an overall band score of 6+, subject to individual profile; or
- 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 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 successful completion of the two core subjects and two elective subjects. The eligibility for the Graduate Diploma requires the successful completion of both (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.

### Year 1

#### Core Subjects

<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>VEA6310 LINEAR SYSTEMS AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Two of Approved Elective Units of Study

#### Elective Subjects

<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>VEA6311 MODELLING AND COMPUTER CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6341 MEASUREMENT TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

VEA6312 MODEL BASED PROCESS CONTROL
12 0.1250 2 $712 $890 $1,584
VEA6322 PROCESS INSTRUMENTATION AND CONTROL
12 0.1250 2 $712 $890 $1,584
VEA6332 ELECTRONIC CONTROL OF MOTORS
12 0.1250 2 $712 $890 $1,584
VEA6342 POWER DISTRIBUTION SYSTEMS
12 0.1250 2 $712 $890 $1,584
VEA6352 DIGITAL SIMULATION OF PROTECTION SYSTEMS
12 0.1250 2 $712 $890 $1,584
AND FOUR of Approved Elective Units of Study
OR
VEA6350 MINOR PROJECT
12 0.2500 2 $1,424 $1,780 $3,168
AND TWO of Approved Elective Units of Study

Assessment
Assessment will be based on a combination of written assignments, laboratory exercises, project work, and formal examinations. Supplementary assessments are not normally available.

GRADUATE DIPLOMA IN TELECOMMUNICATION ENGINEERING (I)
Course Code: EGTE

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 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 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.

The minor project may be substituted with the project subjects.

Core Subjects

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Full Fee (AUS)</th>
<th>From 2005 Full Fee (AUS)</th>
<th>Full Fee (AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VET6510</td>
<td>COMMUNICATION THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VET6520</td>
<td>DIGITAL COMMUNICATION PRINCIPLES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
</tbody>
</table>

Elective Subjects

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Full Fee (AUS)</th>
<th>From 2005 Full Fee (AUS)</th>
<th>Full Fee (AUS)</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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VET6531</td>
<td>WIRELESS COMMUNICATION SUBSYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VET6522</td>
<td>TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VET6532</td>
<td>MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td>VET6562</td>
<td>DIGITAL SIGNAL PROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
</tbody>
</table>

Project Subjects

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 Full Fee (AUS)</th>
<th>From 2005 Full Fee (AUS)</th>
<th>Full Fee (AUS)</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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $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>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
<td>$712 $890 $1,584</td>
</tr>
</tbody>
</table>

Project Subjects

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) IN COMPUTER TECHNOLOGY
Course Code: EHEC

Course Objectives
The course is designed to enhance the skills acquired in the Computer Technology Degree course, by developing the research potential of the students and allowing in-depth study topics in a range of computer technology subjects.
The Honours Degree provides for a research project and a selection of advanced elective subjects. This year may lead to further postgraduate opportunities. The choice of subjects is dependent upon the student's background and intended area of further study.

Admission Requirements and Prerequisites
To qualify for admission the student must have completed an appropriate undergraduate course of at least three years in duration, and obtained results of 60 per cent and higher in the majority of subjects undertaken.

Course Duration
The course is offered on a full time basis over one year, 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</th>
<th>From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEC4701 RESEARCH PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</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</th>
<th>From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEC4702 RESEARCH PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

Elective subjects (24 credit points per semester)
The elective subjects are to be chosen from the range of final year undergraduate subjects (no more than two at third year level) and postgraduate subjects, as approved by the Course Co-ordinator.

Masters of Engineering Science in Computer & Microelectronic Engineering (Coursework) (I)

Course Code: EMCE

Course Objectives
The computer systems engineer today is faced with many challenges brought about by the rapid advances in computer multimedia and telecommunication technology. The recent development of computer systems engineering has established a firm foundation for a need of qualified engineers in this high technology industry.

The Master of Engineering Science course in Computer Systems Engineering addresses all aspects of this technology. From high level specification of computer and microelectronic systems, through implementation alternatives, to realisation of chips and also introduces students to the anticipated 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 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 specific aims of the course are to: provide an integrated foundation for electrical disciplinary studies and course specialisation into the area of Computer Systems Engineering; develop the advanced technical skills necessary to master state of the art microelectronic technology; develop research skills necessary to obtain specialist knowledge of subjects pertinent to a given field of study; 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 requires a four year Bachelor of Engineering degree in Electrical & Electronic Engineering or a four year Bachelor of Applied Science (Honours) degree in an appropriate field, or an equivalent.

Applicants with a three year Bachelor of Applied Science degree (in an 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 complete some preliminary subjects that will strengthen their proficiency in English Language, as assessed by;
- IELTS – an overall band score of 6.5, subject to individual profile; or
- TOEFL – a score of 590, and a Test of Written English (TWE) score of 5.5.

Course Duration
The course is of one year duration 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.

<table>
<thead>
<tr>
<th>Core Subjects</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>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elective Subjects</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>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6010 RELIABILITY AND TESTABILITY IN IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6011 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6012 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6009 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6011 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6012 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6101 ASIC DESIGN TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6102 CUSTOM IC DESIGN B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6111 DIGITAL CIRCUIT DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6121 BASIC IC DESIGN/DEVICES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6122 CUSTOM IC DESIGN A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6152 MICROPROCESSOR DESIGN TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>
Assessment
Assessment will be based on a combination of written assignments, laboratory exercises, project works, tests, and examinations.

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 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 two years for full time students and a part time equivalent for part time students.

Course Structure
The course is unit based and offers a range of study units comprising of core and elective subjects (each of one unit) in a chosen area of specialisation, a research project (of four units), and a project management program (of four units). A unit is worth 12 credit points. The completion of the course requires the completion of 16 units comprising of four core subjects in a chosen area of specialisation, four other units at Masters level from any Masters programs, and, either a research project in the chosen area of specialisation, or the project management program.

Automation Engineering Specialisation

<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>VEA6311 MODELLING AND COMPUTER CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6312 MODEL BASED PROCESS CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6321 FUZZY AND NEUTRAL CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6322 PROCESS INSTRUMENTATION AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Elective Subjects

<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>VEA6331 ROBOTICS AND PROGRAMMED CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6332 ELECTRONIC CONTROL OF MOTORS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6341 MEASUREMENT TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6342 POWER DISTRIBUTION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6351 POWER SYSTEMS OPERATION AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEA6352 DIGITAL SIMULATION OF PROTECTION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Computer Engineering Specialisation

<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>VEC6111 COMPUTER TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6112 ADVANCED MICROPROCESSORS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6121 OBJECT ORIENTED SOFTWARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6122 OPERATING SYSTEMS AND MULTIPROCESSING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Elective Subjects

<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>VEC6131 COMPUTER INTERCONNECTION HARDWARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6132 DIGITAL SYSTEM MODELLING AND SIMULATION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6141 SOFTWARE ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6142 MANAGING SOFTWARE PROJECTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6151 DATABASE AND QUERY SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEC6152 APPLIED KNOWLEDGE SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Microelectronic Engineering Specialisation

<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>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6003 EDA TOOLS AND DESIGN METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6004 DIGITAL SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Elective Subjects

<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>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6008 VLSI DIGITAL SIGNAL PROCESSING SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6009 RELIABILITY AND TESTABILITY IN IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6014 RF AND MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6017 DIGITAL SYSTEM DESIGN WITH VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VEH6018 ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Photonic Engineering Specialisation

<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>VPP6511 FIBRE OPTIC COMMUNICATION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VPP6512 ADVANCED FIBRE OPTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VPP6521 OPTICS AND LASERS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>VPP6522 DIGITAL COMMUNICATIONS OVER OPTICAL NETWORKS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

Elective Subjects

<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>VPP6531 QUANTUM OPTICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>
The specific aims of the course are to:

- develop the advanced technical and algorithmic skills necessary to master state of the art microelectronic technology and computer system;
- develop integrated circuit design expertise in embedded systems, digital, mixed signal and system-on-chip systems design and verification, and advanced computer systems architecture;
- cultivate logical and lateral thinking that leads to creation and innovation in the pursuit of solutions to engineering problems.

The general aims of the course are to provide graduates with:

- high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
- the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
- a level of professional development in confidence, judgement and experience such that the implementation of proposed solutions proceeds successfully.

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.

Admission Requirements

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.

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.

Masters of Engineering in Microelectronic Engineering/Master of Engineering Science in Computer and Microelectronic Engineering

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.

Specific aims of the course are:

- 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 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.

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 microelectronic 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 either four core unit, 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 unit, 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.

Admission Requirements

Admission to the course normally requires a four year Bachelor of Engineering degree in Electronic Engineering or Computer Engineering or

A panel comprising of academics from each of the partner universities will carry out student selection into this course.

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.

Assessment

Assessment will be a combination of written assignments, tests, laboratory work, project work and examinations. Supplementary assessment is not normally available in any unit except at the discretion of the Head of School/Department of the University offering the unit and under exceptional circumstances.

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 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:

1. high levels of both logical and lateral thinking development so that the graduates can lead constructive change through innovation;
2. the ability to use a multi-disciplinary engineering philosophy towards the synthesis, design and integration of solutions; and
3. 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; and
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

TOEFL – a score of 580, and a Test of Written English (TWE) score of 5.5.

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.
SCHOOL OF ELECTRICAL ENGINEERING

Year 1

<table>
<thead>
<tr>
<th>Course Units</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>VEH6001 HDL AND HIGH LEVEL SYNTHESIS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6002 IC DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND FIVE of Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Electives

<table>
<thead>
<tr>
<th>Course Units</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6007 ADVANCED VLSI DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6016 VERILOG HDL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6019 ANALOG &amp; MIXED SIGNAL DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEH6020 MINOR PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEH6030 MAJOR PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>AND VEH6030 MAJOR PROJECT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OR VEH6020 MINOR PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>AND 2 OF Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: All Special Electives for Chipskills program are to be approved by the Course Directors (RMIT & VU).

Assessment

Assessment will be a combination of written assignments, laboratory work, project work and examinations. Supplementary assessment is not normally available in any unit except at the discretion of the Head of School/Department of the University offering the unit and under exceptional circumstances.

MASTER OF ENGINEERING IN SYSTEMS AND CONTROL ENGINEERING (I)

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.

Year 1

<table>
<thead>
<tr>
<th>Course Units</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>VEA6310 LINEAR SYSTEMS AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>AND TWO Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AND FOUR Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6300 RESEARCH PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VEA6350 MINOR PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>AND TWO Approved Elective Units of Study</td>
<td></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.

MASTER OF ENGINEERING IN SCIENCE (TELECOMMUNICATIONS ENGINEERING)

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 one and a half year for Master of Engineering, one year for Graduate Diploma, and a half year for Graduate Certificate.
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 Structure

The course is unit based and consists of the following 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.

Elective Units of Study

- VET6511 DATA NETWORK ANALYSIS AND DESIGN
- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

Assessment

Assessment will be based on a combination of written assignments, class tests, laboratory exercises, project work, and formal examinations.

SUPPLEMENTARY DEGREES

The duration of the course is one year for Bachelor of Engineering, one and a 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 minor project may be substituted with the project subjects.

Elective Subjects

- VET6510 COMMUNICATION THEORY
- VET6520 DIGITAL COMMUNICATION PRINCIPLES
- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

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 year for Master of Engineering, one year for Graduate Diploma, and a half year for Graduate Certificate.

Core Subjects

- VET6510 COMMUNICATION THEORY
- VET6520 DIGITAL COMMUNICATION PRINCIPLES

TWO of Approved Elective Units of Study

- VET6511 DATA NETWORK ANALYSIS AND DESIGN
- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

Project Subjects

- VET6501 COMMUNICATION SYSTEM MODELING AND SIMULATION 1
- VET6502 COMMUNICATION SYSTEM MODELING AND SIMULATION 2

- VET6510 COMMUNICATION THEORY
- VET6520 DIGITAL COMMUNICATION PRINCIPLES

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS
- VET6531 WIRELESS COMMUNICATION SUBSYSTEMS
- VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY
- VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study

- VET6551 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS
- VET6561 LOCAL AREA AND BROADBAND NETWORKS
- VET6562 DIGITAL SIGNAL PROCESSING

AND FOUR of Approved Elective Units of Study
## MASTERS (BY RESEARCH)

### Course Code: ERIT, EROT

<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 From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCC8001 RESEARCH THESIS FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VMR8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VEE8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VQT8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VPP8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>VPT8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
<tr>
<td>RPH8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

| Semester 2 | VCC8002 RESEARCH THESIS FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| VMR8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| VEE8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| VQT8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| VPP8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| VPT8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |
| RPH8002 RESEARCH THESIS 2 FULL TIME | 48 | 0.5000 | 2 | $2,847 | $3,559 | $6,336 |

### Year 1

| Semesters 1 & 2 Part Time | VCC8011 RESEARCH THESIS (PART TIME) | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VMR8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VEE8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VQT8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VPP8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VPT8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| RPH8011 RESEARCH THESIS 1 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |

### Year 2

| Semesters 1 & 2 Part Time | VCC8012 RESEARCH THESIS (PART TIME) | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VMR8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VEE8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VQT8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VPP8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| VPT8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |
| RPH8012 RESEARCH THESIS 2 PART TIME | 24 | 0.2500 | 2 | $1,424 | $1,780 | $3,168 |

### MASTERS OF ENGINEERING (RESEARCH)

### Course Code: ERIT, EROT

<table>
<thead>
<tr>
<th>Course Structure</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEE8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>VEE8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>VEE8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td>VEE8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td>or RPH8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>RPH8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>RPH8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td>RPH8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
</tbody>
</table>

### Postgraduate Programs by Coursework

The School offers a range of coursework programs at postgraduate level:

- Graduate Certificate in:
  - Microelectronic Engineering;
  - Systems and Control Engineering;
  - Telecommunication Engineering;

- Graduate Diploma in:
  - Microelectronic Engineering
  - Systems and Control Engineering
  - Telecommunication Engineering
Master of Engineering in:
- Electrical and Electronic Engineering
- Microelectronic Engineering
- Systems and Control Engineering
- Telecommunication Engineering

Master of Engineering Science in:
- Computer and Microelectronic Engineering

Double Degrees:
- Master of Engineering in Microelectronic Engineering/Master of Engineering Science in Computer and Microelectronic Engineering

Progression Regulations
These regulations should be read in conjunction with Victoria University's Statute 6.4.1. – Unsatisfactory Progress.

(i) The following shall constitute unsatisfactory progress:
(a) failure in at least 50 per cent of the assessed subjects for which a student has enrolled in a semester of study,
(b) failure in any subject twice,
(c) transgression of a conditional enrolment stipulation and agreement.

(ii) Where a student's progress is unsatisfactory, the Departmental Academic Progress Committee may recommend the following:
(a) a restricted and conditional enrolment only be approved,
(b) exclusion from the course.

(iii) A student who wishes to appeal against the Department's written recommendation is required to do so in accordance with the University's Statutes. The procedures to be followed in lodging a submission, hearing of submissions and communicating the results of hearings are set out in the University's Statutes.

(iv) Excluded students have no right of re-admission to the course from which they were excluded. Students who have been excluded may apply for re-admission not less than one calendar year from the date of exclusion. The student must provide, with his or her application, evidence of changed circumstances which significantly improve the applicant's likelihood of academic success.

Supplementary Assessment
(i) Supplementary assessment is not normally available in any subject or course of the School, other than for reasons of Special Consideration of illness or other cause.

(ii) In special circumstances the Head of School may authorise supplementary assessment in one or more subjects.

(iii) Supplementary assessment may be initiated by a subject Examination Board or the School, where appropriate special grounds are seen to exist.

(iv) Supplementary assessment will require application, authorisation, and the payment of fees as defined by the School from time to time.

GRADUATE CERTIFICATE IN MICROELECTRONIC ENGINEERING (I)

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.

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.
### GRADUATE CERTIFICATE IN SYSTEMS AND CONTROL ENGINEERING (I)

**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>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>Core Subjects</strong></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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>TWO of Approved Elective Units of Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Elective Subjects</strong></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>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6341 MEASUREMENT TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6312 MODEL BASED PROCESS CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6322 PROCESS INSTRUMENTATION AND CONTROL</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6332 ELECTRONIC CONTROL OF MOTORS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6342 POWER DISTRIBUTION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>VEA6352 DIGITAL SIMULATION OF PROTECTION SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td><strong>Projects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VEA6350 MINOR PROJECT</td>
<td>12</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
<tr>
<td>VEA6300 RESEARCH PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</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.

### GRADUATE CERTIFICATE IN TELECOMMUNICATION ENGINEERING (I)

**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 one and a 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.

The minor project may be substituted with the project subjects.

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

Core Subjects
VET6510 COMMUNICATION THEORY 12 0.1250 2 $712 $890 $1,584
VET6520 DIGITAL COMMUNICATION PRINCIPLES 12 0.1250 2 $712 $890 $1,584
TWO of Approved Elective Units of Study

Elective Units of Study
VET6511 DATA NETWORK ANALYSIS AND DESIGN 12 0.1250 2 $712 $890 $1,584
VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS 12 0.1250 2 $712 $890 $1,584
VET6531 WIRELESS COMMUNICATION SUBSYSTEMS 12 0.1250 2 $712 $890 $1,584
VET6541 MULTIMEDIA AND INTERNET TECHNOLOGY 12 0.1250 2 $712 $890 $1,584
VET6551 MICROWAVE ELECTRONIC CIRCUIT DESIGN 12 0.1250 2 $712 $890 $1,584
VET6561 LOCAL AREA AND BROADBAND NETWORKS 12 0.1250 2 $712 $890 $1,584
VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT 12 0.1250 2 $712 $890 $1,584
VET6522 TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING 12 0.1250 2 $712 $890 $1,584
VET6532 MICROWAVE AND SATELLITE COMMUNICATION SYSTEMS 12 0.1250 2 $712 $890 $1,584
VET6542 MOBILE AND PERSONAL COMMUNICATION SYSTEMS 12 0.1250 2 $712 $890 $1,584
VET6552 COMPUTER NETWORKS AND NETWORKING SOFTWARE 12 0.1250 2 $712 $890 $1,584
VET6562 DIGITAL SIGNAL PROCESSING 12 0.1250 2 $712 $890 $1,584

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 (I)
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
RPH4411 PHYSICS 4 (HONOURS) (48 per semester)

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

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 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

REP1001 ENGINEERING PHYSICS 1A
Campus Footscray Park
Prerequisite(s) Nil.
Content Physical Units and Dimensions: Physical quantities, system of units and standards, dimensions, 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 Nil.
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.
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.

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. Computer laboratory interfacing: Analogue to digital conversion: Data acquisition, time varying signals and the sampling theorem. Digital to analogue conversion: Generation of DC and AC voltages. Adaptive computer control: Open-loop system response, performance criteria. Control types, hysteresis. Digital input and output. General Purpose Interface Bus (GPIOB); description and overview. 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.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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.

Assessment A series of regular group assignments and tests will be negotiated for each individual student or group of students with a similar background. The assessment regime will be equivalent to that for a second year physics subject in a technological degree in the content areas covered by this subject whilst recognising the differing backgrounds of the students undertaking the subject – especially in mathematics.

REP4300 EINSTEIN'S THEORY OF RELATIVITY
Campus Footscray Park
Prerequisite(s) Nil
Content Newtonian Relativity; Frame of Reference transformations; Einstein's relativistic postulates; Time dilation and length contraction; Relativistic velocity and mass; E=mc2; Introduction to General Relativity.

Required Reading No text will be prescribed. Students will be expected to read widely around the topics in the subject.


Class Contact 24 hours per semester of lecture/tutorial/seminar sessions.
Assessment 60% assignments submitted throughout the semester – approximate length of no more than eight A4 pages each; 40% classroom presentation chosen from a range of topics provided by the lecturer in charge.

RPH1111 ASTRONOMY
Campus Footscray Park
Prerequisites
Co-requisites
Learning Outcomes Knowledge of Astronomy: To gain a good overview of our current knowledge of the universe, including its formation and the subsequent evolution of stars and galaxies. Practical Astronomy: To be able to use an amateur telescope to view well-known stellar objects.

Content History of astronomy, telescopes, our sun, solar system, comets, meteors, the night sky, stellar evolution and spectra, variable stars, distances of celestial objects, galaxies, some predictions of Einstein's theory of relativity, the possibility of intelligent life elsewhere in the universe and high power astronomy (pulsars, black holes and quasars).


Class Contact 48 hours per semester comprising 36 hours of lectures/tutorial and 12 hours of laboratory
Assessment Practical sessions 20% Assignments 80%.

RPH4411 PHYSICS 4 (HONOURS)
Campus Footscray Park
Prerequisite(s) Eligibility for entry to the Bachelor of Science (Honours) in Physics program.

Content This subject consists of advanced coursework and a research thesis.

Coursework: Compulsory core units of quantum mechanics, statistical mechanics and research methods, plus elective units from the following areas: optical waveguides and sensors, relativity, solid-state 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. All electives must be approved by the Course Co-ordinator.

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 two semesters.

Assessment is based on coursework, 50%; research thesis, 50%. The research project will consist of oral presentation and a thesis of approximately 5,000-10,000 words.

RPH4412 PHYSICS 4 (HONOURS)
Campus Footscray Park
Co-requisites
Learning Outcomes Advanced coursework:

- To gain a deeper understanding of quantum mechanics and statistical mechanics, and in addition undertake further studies in areas of physics related to the thesis. Research thesis:

- To gain experience in the conduct of a research project.

Content Coursework: Compulsory core units of quantum mechanics, statistical mechanics and research methods, plus elective units from the following areas: optical waveguides and sensors, relativity, solid-state 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.


Recommended Reading

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/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/PolicyProcessessandGuidelines/

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/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/PolicyProcessessandGuidelines/

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/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/PolicyProcessessandGuidelines/
RP80012 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/Policy ProcessesandGuidelines/

VEA3000 CONTROL SYSTEMS A
Campus Footscray Park
Prerequisite(s) Linear Systems and Mathematics 2B.
Required Reading Control Systems A Subject Notes, Victoria University.
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.
Required Reading Computer Controlled Systems Subject Notes, Victoria University.
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.

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) VEA3000 Control Systems A.
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.
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) VEA3000 Control Systems A.
Required Reading Optimal Control Systems Subject Notes, Victoria University.
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.
Required Reading Handout Notes.
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) VEA3000 Control Systems A.
Content Tracking and disturbance rejection performance measures
The sensitivity function and the complementary sensitivity function.
Model errors and robustness concepts Conditions for robust stability.
The algebraic constraint and its implications. Two degrees of freedom
controllers. Internal Model Control Perfect control. Internal Model
Control and MIMO. Performance and robustness trade-off via loop-
shaping. Introduction to the co-prime factorization approach Co-prime
factorization of transfer functions. The Q-parameterization of all
stabilizing controllers. Model reference design and reciprocity weighting
functions.
Required Reading Robust Control Systems Subject Notes, Victoria
University.
Recommended Reading N.S. Nise, Control Systems Engineering.
John Wiley, 2000; B.C. Kuo, Automatic Control Systems, Prentice-Hall,
1995; D. Frederick & J. Chow, Feedback Control Problems using
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) VEA3000 Control Systems A.
Content Least squares estimator The principle of orthogonal
projection. Statistical properties of estimators. Bias and variance of
models. Conditions for unbiased estimator. Relation to minimum
variance and maximal likelihood estimators. Prediction error method
Minimization of prediction errors. Residuals, statistical properties.
Model structures and model set Autoregressive with eXogenous input,
AutoRegressive Moving Average with eXogenous input, Output Error,
and Box-Jenkins models. Parameter estimation algorithms Linear
regression. Pseud-linear regression. Batch processing and recursive
processing. Input signal design Input signal power spectrum. Effects of
chosen model structure and input signal on bias and variance. Model
unfalsification Cross validation of model. Tests of models for prediction
and control design applications.
Required Reading System Identification for Control Subject Notes,
Victoria University.
Recommended Reading L. Ljung, System Identification: Theory for
the user. latest edition, Prentice-Hall.
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%.

VEA6300 RESEARCH PROJECT
Campus Footscray Park
Prerequisite(s) VEA6310, VEA6320
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
supervisors, and six hours per week independent study.
Assessment Regular seminar presentations (3 seminars, each of 20
min. duration) 30%; Final report (Approximately 25,000 words) 50%;
Final seminar presentation (40 min. duration) 20%. Final report is to be
examined by an external examiner who could also be present at the
final presentation.

VEA6310 LINEAR SYSTEMS AND CONTROL
Campus Footscray Park
Prerequisite(s) A knowledge of linear control systems covered in a
standard B.Eng. course.
Content Linear dynamical systems. State space representations of
linear systems. System gain and direction. Controllability, observability,
and Kaiman's canonical decomposition. State feedback and output
injection. Hankel matrix of a linear system and irreducible realizations.
Hankel singular values, balanced realization, model reduction via
balanced truncation. Coprime factorizations of transfer function
matrices. Youla-Kucera parametrization of all stabilizing controllers.
Analytical design of controllers. Formulation of modern optimal control
problems.
Required Reading S. Skogestad and I. Postlethwaite, 2002,
Multivariable Feedback Control: Analysis and Design, John Wiley,
London.
Recommended Reading C.T. Chen, 1984, Linear System Theory and
Prentice-Hall, New York.
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.

VEA6311 MODELLING AND COMPUTER CONTROL
Campus Footscray Park
Prerequisite(s) VEA6310 or equivalent subjects.
Content Overview of computer control. Sampling of continuous-time
signal. Computer-oriented mathematical models; discrete-time
systems. Linear regression model and system identification. Analysis of
discrete-time control systems. Translation of analog design. State-
space design methods. Implementation of digital controllers.
Introduction to adaptive control.
Required Reading Aström, K.J. and Wittemen, B., Computer
Recommended Reading Johansson, R., System Modeling and
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 realisation of continuous-time Smith Predictors;
design of the unified predictive controller (UPC). Analysis of design
parameters and tuning of the UPC.
Required Reading To be advised by the lecturer.
Recommended Reading Morari, M. and Zaifriou, E., Robust Process
Control, Prentice Hall, 1989. Soeterboek, R., Predictive Control – A
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.
Content A probabilistic framework for filtering and parameter
estimation in systems and control. Modelling of noise and disturbance
as random processes, Gauss-Markov signal models. Conditional
expectation and minimum error solutions to filtering problems. The
discrete-time Kalman filter and innovations. The principle of orthogonal
projection. Recursive parameter estimators. The maximum-likelihood
estimator and the EM-algorithm. The extended Kalman filter.
Required Reading Poor, H.V., 1994, An Introduction to Signal
Recommended Reading Anderson B.D.O. and Moore, J. B., 1979,
Optimal Filtering, Prentice Hall, New Jersey.
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.
Corequisite Nil.


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.

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


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.
Corequisite Nil.

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, 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.

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: 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
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 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.

VVEB2002 PBL & ENGINEERING PRACTICE 2B
Campus Footscray Park
Prerequisites VEB2001 PBL & Engineering Practice 2A, or equivalent.

Co-requisites
Learning Outcomes
Upon completion of this subject, students will be able to:

- Demonstrate the successful completion of 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 VEF2001 and VEF2002 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.

VEC1001 COMPUTER ENGINEERING 1A
Campus Footscray Park
Prerequisite(s) Nil.


**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%.

**VEC1002 COMPUTER ENGINEERING 1B**

**Campus** Footscray Park

**Prerequisites** 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%.

**VEC4701 RESEARCH PROJECT**

**VEC4702 RESEARCH PROJECT**

**VEC6111 COMPUTER TECHNOLOGY**

**Campus** Footscray Park

**Prerequisites** Nil

**Content** The subject investigates high level design techniques used in computer system hardware development. The subject examines the algorithmic state machine design method. Controller and architecture division. Controller design methods. Linked and partitioned state machines. Register transfer language and synthesis. Logical faults and test vector generation. Asynchronous system analysis and design.

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

**Class Contact** Three hours per week for one semester.

**Assessment** Final examination, 65%; tests, 35%.

**VEC6112 ADVANCED MICROPROCESSORS**

**Campus** Footscray Park

**Prerequisites** 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 comprising two hours lecturers/tutorials and one one-hour laboratory.

**Assessment** Examination 100%.

**VEC6121 OBJECT ORIENTED SOFTWARE**

**Campus** Footscray Park

**Prerequisites** Nil

**Co-requisites** 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%.

**VEC6122 OPERATING SYSTEMS AND MULTIPROCESSING**

**Campus** Footscray Park

**Prerequisites** 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

**Prerequisites** 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 network (e.g. token ring) interface design.

**Required Reading** To be advised by 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

**Prerequisites** 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.

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

**Class Contact** Three hours per week for one semester comprising two hours of lecture/tutorial 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.

VEC6141 SOFTWARE ENGINEERING
Campus Footscray Park
Prerequisite(s) 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% lectures/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 software 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 lecturer.

Class Contact Three hours per week for one semester comprising approximately 65% lectures/tutorials and 35% laboratory.

Assessment Examination, 50%; assignments and project work, 50%.

VEC6151 DATABASE AND QUERY SYSTEMS
Campus Footscray Park
Prerequisite(s) 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 DBMS, physical data organisation, database architecture, SQL, 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
Prerequisite(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, heatsink design, properties of sound, noise exposure limits, noise control, illumination basics, properties of artificial light sources, and interior illumination design.


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.

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.


Class Contact 48 hours per semester, consisting of 36 hours of labs, and 12 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 50%, assignment, exam 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 gulf between designing a working prototype, and designing for production. Worst case and Monte Carlo techniques are covered.


Class Contact: 48 hours per semester, consisting of 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, consisting of 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 progress talks 10%, final presentation talk 15%, final report, and project performance and quality 50%, assignments, tests/exams 25%.

VED3000 ELECTRICAL MACHINES AND ENERGY SYSTEMS

Course: Footscray Park
Prerequisite(s): 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).

VED4000 POWER ELECTRONICS AND DRIVES B

Course: Footscray Park
Prerequisite(s): 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).

VED4100 ELECTRIC ENERGY SYSTEMS ANALYSIS AND OPERATION

Course: Footscray Park
Prerequisite(s): VEE3000 Electric Machines & Energy Systems A.

Content: Load flow analysis techniques, Gauss Siedel and Newton Raphson methods, uses of load flow analysis, cases studies. Short circuit analysis using Zbus, cases 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.

Assessment: Assignment and Laboratory Exercises 40%; End of semester examination 60%; A pass in each component of assessment is required for a subject pass.

VED4200 ELECTRIC ENERGY SYSTEMS PROTECTION

Course: Footscray Park
Prerequisite(s): VEE3000 Electric Machines and Energy Systems A.
VEE6050 PROJECT MANAGEMENT PROGRAM
Campus Footscray Park
Prerequisite(s) Completion of at least eight units of the course.
Required Reading Project Management Institute, 2000, A Guide to Project Management Body of Knowledge, Newton Square, Pennsylvania, USA.
Class Contact For each unit: Three hours per week comprising lectures, tutorials, seminars, and group activities.
Assessment For each unit: Class Test (Two Hours) 20%; Assignment (report not exceeding 5000 words) 20%; Final examination (Three Hours) 60%.

VEE8001 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/

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/OfficeforPostgraduateResearch/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/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

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/OfficeforPostgraduateResearch/Policy ProcessesandGuidelines/

VFF1001 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. Modulo, 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, differentiation 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. 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, transistors, rectifying circuits, bridge rectifiers, smoothing circuits, introduction to operational amplifiers.
Recommended Reading G.F.Fitzgerald and I.A. Peckham.

VFF1003 ELECTRICAL FUNDAMENTALS 1A
Campus Footscray Park
Prerequisite(s) Year 12 mathematics or its equivalent.
Number Systems and Codes: Base conversions, representation of data in the binary and hexadecimal systems, binary arithmetic, signed and unsigned values.
Required Reading Ives, R Introduction to Electrical and Electronic Engineering, Victoria University; Savitch, W. Problem Solving with C++, 4th edition, 2004, Addison-Wesley.

VFF1004 ELECTRICAL FUNDAMENTALS 1B
Campus Footscray Park
Prerequisite(s) VFF 1003 Electrical Fundamentals 1A or equivalent.
synchronous counter and state machine design. Electrical characteristics of logic devices.

**Required Reading** Ives, R Electrical and Electronic 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** VEF 1002 Enabling Sciences 1B and VEF 1004 Electrical Fundamentals 1B

**Co-requisites**

**Learning Outcomes** Upon completion of this subject students will be able to:
- perform time-domain analysis of linear time-invariant systems using Laplace transforms,
- perform frequency-domain analysis of linear time-invariant systems using Fourier series and Fourier transforms,
- apply linear algebra to find trajectories of linear systems modelled as a system of first-order linear ordinary differential equations with constant coefficients,
- employ simple Matlab commands and Simulink to analyse linear time-invariant systems.


**Class Contact** Linear Systems component: Three hours of lecture and problem solving 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** 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** VEF 1003 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.

**Digital Systems:** Data path elements including encoders, decoders, comparators, multiplexers, demultiplexers, multi-mode synchronous counters registers, shift-registers, arithmetic circuits and ROMs. Applications of data path elements. Data path element function, description in VHDL and synthesis onto programmable logic devices. Computer Programming: Pointers and the use of pointers in data storage, manipulation and data structures. The creation and use of "classes". Binary files and random file input/output. An introduction to image processing using bitmap image files.

**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.


**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.

VEF2004 SYSTEMS & APPLICATIONS 2D
Campus Footscray Park
Prerequisites VEF2003
Corequisites
Learning Outcomes Upon completion of this subject students will be able to: (i) Analyse a range of circuit types and assess the circuit performance. (ii) Design circuits to meet performance criteria and select suitable components for circuit realization. (iii) Implement optimal state machines for a range of electronic engineering applications. (iv) Apply a system level approach to digital design using the algorithmic state machine design paradigm. (v) Be able to appreciate fundamentals of mechanical and electromagnetic energy conversion. (vi) Be able to analyse simple power systems containing dc machines, transformers and balanced 3 phase ac supplies.


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.

VEG4001 PROFESSIONAL ENGINEERING PRACTICE 4A
Campus Footscray Park
Prerequisite(s) Normally, successful completion Professional Engineering 4A or equivalent.

Content Engineering Practice (A, B, E): Developing a professional image; Integration of engineering with other professional input*; Preparing and maintaining documentation during the design process*; Preparing written and oral skills to enhance the quality of documentation and presentation*. Engineering Planning and Design (A, B, E): Interpreting and scoping design requirements*; Preparing concept proposal and seeking advice on latest technology*; Reviewing design outcomes in operation; Implementing planning and design process*; Reviewing design to constraints on potential engineering solutions*. Engineering Planning and Design (A, B, E): Interpreting and scoping design requirements*; Preparing concept proposal and seeking advice on latest technology*; Implementing planning and design process*; Reviewing design to achievable acceptance*. Reviewing design outcomes in operation; Preparing and maintaining documentation during the design process*; Preparing written and oral skills to enhance the quality of documentation and presentation*. Engineering Business Management (B, E): Contributing to engineering business solutions; Developing client relationships; Preparing the implementation of engineering plan within a business; Managing resources; Managing people. Engineering Business Information (B,E): Engineering Project management; Interpreting and scoping project requirements; Developing project integration; Managing quality, safety and risks; Managing costs and procurement; Managing time and progress; Finalizing Projects. Preparation for Employment (A,B): Preparing a job application; Constructing a C.V.; Preparing for Interview; Interview Techniques; Presentation skills; Employees rights and obligations.

These topics will be closely linked to the student experiences in VED4001/2 Engineering Design and Projects 4A/4B


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 utilising different attendance regimes.

Assessment Three 10 page* assignments – totalling 60%; One 20-minute seminar presentation – 20%; Construction of a resume, response to a position application and mock interview – 20%.

VEG4002 PROFESSIONAL ENGINEERING PRACTICE 4B
Campus Footscray Park
Prerequisite(s) Normally, successful completion Professional Engineering 4A or equivalent.

Content Engineering Practice (A, B, E): Planning operations and systems; Managing the processes within the operation/systems; Managing the assets within the operation/systems; Managing people within the operation/systems; Measuring and documenting engineering operation/systems#; Developing written and oral skills to enhance the quality of documentation and presentation#.

Materials – Components – Systems (B, E): Determining engineering requirements; Designing and developing materials/components/systems; Defining processes to prepare materials/components/systems for use in project operation; Managing the use of materials/components/systems within the project/operation. Environmental Management Planning (B, E): Determining the environmental condition; Establishing stakeholders’ expectations; Reviewing existing environmental conditions against stakeholders’ expectations; Developing and ranking strategies to achieve sustainable development: Implementation, monitoring and evaluation of strategies. Investigating and Reporting (A,B,E): Responding to and identification of problems#; Planning the investigation#; Implementing the investigation#; Reaching conclusions and making recommendations (B, E): Research, Development and Commercialisation; Identification of opportunities for new or improved process and/or products; Identification of the resources required for the R & D; Development of concept; Development of commercialisation proposal. Self Management (B,E): Managing self – ethical behaviour*; Working effectively in a team*; Managing information*; Managing work priorities and resources*. Preparation for Employment (A, B): Preparing a job application*; Constructing a C.V.*; Preparing for Interviews*; Interview Techniques*; University Capstone Task*. *Revision and extension of previous studies in this area.

These topics will be closely linked to the student experiences in VED4001/2 Engineering Design and Projects 4A/4B


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 utilising 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.


**Required Reading**

Digital Signal Processing 1 Subject Notes, Victoria University.

**Recommended Reading**


**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 2B

**Content**


**Required Reading**


**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 20%; End of semester examination 60%.

---

**VEH4000 COMPUTER AND DIGITAL DESIGN B**

**Campus** Footscray Park

**Prerequisite(s)**

VEH3000 Computer and Digital Design A.

**Content**


**Required Reading**


**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 20%; End of semester examination 60%.

---

**VEH4300 SYSTEMS ON A PROGRAMMABLE DEVICE**

**Campus** Footscray Park

**Prerequisite(s)**

VEH4000 Computer and Digital Design B.

**Content**

Commercial 'intellectual property' building blocks including: CPUs, UARTS, I/O devices, timers, and special function modules. Incorporating commercial blocks with user-created (VHDL) blocks. The software development process and tools for 'system on a chip' applications. In-circuit debugging and testing. Use of static RAM type

FPGAs in manufactured products, configuration device considerations. Conversion of FPGA prototypes to full custom, mass produced parts.

**Required Reading**


**Recommended Reading**


**Class Contact**

30 hours per semester comprising 10 hours of lectures/tutorial and 20 hours of laboratory.

**Assessment**

Laboratory based, design build and test activities 100%.

**VEH6001 HDL AND HIGH LEVEL SYNTHESIS**

**Campus** Chipskills Partner Universities

**Prerequisite(s)**

Completed Digital Systems at undergraduate level or equivalent.

**Content**

Software development process and tools for 'system on a chip' generation algorithms, built in self-test, boundary-scan methods.

**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, 20%; project, 50%; and final examination, 30%.

**VEH6002 IC DESIGN**

**Campus** Chipskills 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, pmos transistor circuits, sequential circuits, mask level design. Layout considerations, design rules and mask level design. Circuit optimisation techniques. ASIC and custom design, synchronous system design. 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. Basic analog building blocks. Design tradeoffs-cost, power and performance. Testability and yield.

**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**

EDA design flow environment. Tool integration, Embedded development tools. Back-end IC design flow and tools. Front-end IC

**Recommended Reading** Current available text book- students to be advised.


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


**Required Reading** Current available text book – Student to be advised.


**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 wells and quantum dots, Nanomaterials and MEMS, Wide bandgap materials and devices. Plasma-based electron sources, 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 as: 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.


**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.


**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** Overview of DSP: FFT, DFT, Z-transform and sampling theory. FIR and IIR filter design, implementation. Interpolation, decimation and multi-rate systems. Adaptive filtering and applications. DSP software building blocks, nonlinearity and choice of sampling rate. DSP hardware: architecture, processing blocks (multipliers, ALU, MAC, barrel shifter). Pipelining and parallel processing, power consumption and reduction. Folding and unfolding applications: sampling period reduction, designing digital-signal hardware, time-multiplexed design. Systolic array design. Algorithmic strength reduction. Advanced DSP software and hardware. DSP system design.


**Recommended Reading** Bayoumi, M.A., 1994, VLSI Design Methodology for DSP Architectures, Kluwer.

**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)** Completed JRM6001 or equivalent.

**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. Testing methodologies (In-circuit, Burn in self test), Boundary Scan Testing. Memory testing, BIST of RAMs, RAM interconnection testing. Scan based testing of multimegabit memories, external and internal testing of megabit DRAMs. Comprehensive testing of multistage interconnection networks. Embedded system testing. Board-level interconnection testing. Test bench design.


**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.

**Content** MOS and MEMS processes. Bulk and surface silicon micromachining. LIGA techniques. Analog and digital interfacing circuits and sensors. EDA tools for MEM design and implementation.

**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.

**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).

**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.

**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.

**Recommended Reading**

**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 synthesizers, 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.

**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, 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.

**Required Reading**

**Recommended Reading**

**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%; 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 specifications in Verilog, hierarchical modelling concepts, synchronous and asynchronous systems, pipelined architectures, processor architectures, clocks timing and clock distribution, synthesis and advanced concepts in brief.

**Required Reading**

**Recommended Reading**

**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, 35%; final examination, 30%.

**VEH6018 ANALOG & MIXED SIGNAL DESIGN**
Campus Footscray Park

**Co-requisite(s)** EEH6003 – 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, digital 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.

**Required Reading**

**Recommended Reading**

**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 Chipskill Partner Universities

**Prerequisite(s)**
Completed EEH6001, EEH6002, EEH6003 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. Appropriate IEE/IEEE Journal materials.

**Recommended Reading**

**Class Contact**
Eight 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%.

**VEH6030 MAJOR PROJECT**
Campus Chipskll Partner Universities

**Prerequisite(s)**
Completed EEH6001, EEH6002 and EEH6003 or equivalents.

**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. Collaboration with international partners will also be encouraged. A project can be structured to be the equivalent of four units of study. Projects would be expected to demonstrate mastery in chip design and implementation at a level considered no less than that of an experienced practitioner in the field. Students must demonstrate their ability to integrate and draw upon their coursework studies relevant to the project. A dissertation of no less than 15000 words must be submitted and will be examined by two examiners 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. Appropriate IEE/IEEE Journal materials.

**Recommended Reading**

**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)**
VEH6151 VHDL and High-level Synthesis or equivalent

**Content**

**Required Reading**
Selected papers from IEE/EIE Journal. To be advised by the lecturer.

**Recommended Reading**

**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

**Content**

**Required Reading**
Selected papers from IEE/EIE Journal. To be advised by the lecturer.

**Recommended Reading**

**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.

**Content**

**Required Reading**

**Recommended Reading**

**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 30%, Project 40%; final examination 30%.

**VEH6121 BASIC IC DESIGN/DEVICES**
Campus Footscray Park

**Prerequisite(s)**
Completed 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 gate design. Static and dynamic logic. Precharging techniques. Latch up, pass transistor/transition gate logic. PLA logic: static and dynamic design. Memory. Design of subsystems using sequential logic.

**Required Reading**

**Recommended Reading**

**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
Content CMOS cell design: device-level design constraints, Circuit optimisation techniques, gate matrix method. Review of tools for low-level cell design: Mentor Graphics circuit design and verification tools, HSPICE and PSPICE simulation tools. Basic analog building blocks. Timing issues in VLSI circuit design. Design of VLSI system sub-systems: Arithmetic and logic processing elements, adders, counters, etc. data path design and layout. Chip floorplanning.
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 Eshraghian, 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 hours 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 80802 programmable model, data organisation, addressing modes and instructions sets. Exception processing, stack frames, parameter passing and procedure calls. Software development for embedded systems. System bus design and behaviour of decoders, Stack and BERR circuitry using PLDs. Interfacing memory and peripheral devices. Embedded microcontroller devices – 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%.

VEL1001 CIRCUIT THEORY AND ELECTRONICS 1A
Campus Footscray Park
Prerequisite(s) Nil.
Content Communication/Information Skills: Instruction and laboratory report writing, Oral Demonstration.
Class Contact Three hours per week comprising 2 hours of lecture and 1 hour of tutorial.
Assessment 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 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%.
**VEM2012 ELECTRICAL ENGINEERING**

**Campus** Footscray Park

**Prerequisite(s)** REP1002 Engineering Physics 1C.


**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.

**Content** EDA design flow environment. Tools integration. Back-end IC design flow: analog artist environment, layout editor, Cadence simulation and verification tools. Front-end IC design flow: design compiler, FPGA compiler, place and route tools. Embedded systems design flow and development tools.


**Class Contact** 5 hours per week for one semester, comprising of two lecture hours 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.

**Required Reading** Pucknell, D.A. and Eshraghian, K., 1994, Basic VLSI Design system and Circuits, Prentice Hall.


**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)** Analog in Second Year and VEM3000 EDA Tools and Design Methodologies.

**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, 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.


**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.


**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%.

---

**VEM4400 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, pass 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) VEP3000 Photonics A.


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; Iteration; 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/team project 20%; End of semester, open book examination 60%.

VES4000 PROGRAMMING TOOLS AND COMPILERS B
Campus Footscray Park
Prerequisite(s) Completed Second Year.


A project is undertaken to reinforce the principles taught in lectures.


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%.

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%.

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%.

VET3000 TELECOMMUNICATION A
Campus Footscray Park
Prerequisite(s) VEG2002 Introduction to Engineering Systems.
Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory works.
Assessment Laboratory reports, assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

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,. M/M/1 queue, Data network design principles.

Class Contact 60 hours per semester comprising 48 hours of lectures/tutorial and 12 hours of laboratory works.
Assessment Laboratory reports, assignments and class test conducted throughout the semester 30%; End of semester, closed book examination 70%.

VET4100 COMPUTER COMMUNICATIONS
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%.

VET4200 COMPUTER COMMUNICATIONS 2
Campus Footscray Park
Prerequisite(s) VET4100 Computer Communications 1.
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) VET3000 Telecommunication A.

145


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) VET4100 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) VET3000 Telecommunication 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%.

VET4600 WIRELESS COMMUNICATIONS

Campus Footscray Park

Prerequisite(s) VET3000 Telecommunication 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%.

VET4700 COMMUNICATION SYSTEM AND NETWORK DESIGN

Campus Footscray Park

Prerequisite(s) VEG2002 Introduction to Engineering Systems 2.


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 12 hours of practical work.

Assessment Semester Examination 70%; Mid-semester test: 20%; Recommended Reading 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 (of 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.
SCHOOL OF ELECTRICAL ENGINEERING

Content Introduction to research methodology. System modeling. Simulation procedures. MATLAB and its application in the design and simulation of communication subsystems.

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 modeling 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 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.

VET6512 INTELLIGENT NETWORKS AND NETWORK MANAGEMENT

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%.

VET6521 DIGITAL SWITCHING AND SIGNALLING SYSTEMS

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.

VET6522 TELECOMMUNICATION TARIFF STRUCTURES AND TELETRAFFIC ENGINEERING

Campus Footscray Park

Prerequisite(s) Nil.


Recommended Reading Saito, H., 1905, Teletraffic Technologies, Artech House.

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 and delay 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 phase array antennas. Base station antennas for cellular mobile systems. Low profile portable antennas. Modulation and coding for the mobile channel. GMSK, QPSK, and QAM. Bit error rate and error. Link propagation. Coherence bandwidth and phase error. Spread spectrum. CDMA, TDMA and FDMA.
Required Reading To be advised by the lecturer.
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
Assessment Tests/Assignments: 30%; Examination: 70%. 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
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
Assessment Tests/Assignments: 40%; Examination: 60%. A pass in each component of assessment is required for a subject pass.

VET6550 MINOR PROJECT
Campus Footscray Park
Prerequisite(s) VET6510, VET6520
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 member. Regular meetings will be held between 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.
Assessment 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 'Microstrip' transmission line structure. Students will be given small design projects to complete operating at the frequencies relevant to mobile communications (e.g. 0.9 to 3 Gzh). 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.
SCHOOL OF ELECTRICAL ENGINEERING

Recommended Reading

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.

Content

Required Reading

Recommended Reading

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.

Content

Required Reading
To be advised by the lecturer.

Recommended Reading

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.

Content

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 b is required for a subject pass.

VPP6511 FIBRE OPTIC COMMUNICATION SYSTEMS

Campus
Footscray Park
Prerequisite(s) Eligibility for admission to Master's course.

Content

Required Reading

Recommended Reading

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

Required Reading

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.

Content
VPP6522 DIGITAL COMMUNICATIONS OVER OPTICAL NETWORKS
Campus Footscray Park

Prerequisite(s) VPP651 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 parameters, 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 lineairities, 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 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%.

VPP6532 OPTICAL FIBRE SENSORS
Campus Footscray Park

Prerequisite(s) VPP651 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 E/M 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.

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.

Required Reading Issick, C., 1998, Advanced Labview Labs, Prentice-Hall NJ.

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%.

FACULTY OF HEALTH, ENGINEERING AND SCIENCE


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%.
Below are details of undergraduate and postgraduate courses offered by the School of Health Sciences in 2007. 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 CHINESE MEDICINE (ACUPUNCTURE AND HERBS) (I)
Course Code: HBH

Double Major
(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.

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.

<table>
<thead>
<tr>
<th>Year 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>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT1000 MAJOR CLASSICS – NEI JING</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT1001 INTRODUCTION TO CHINESE MEDICAL LITERACY</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHT1002 FUNDAMENTALS OF CHINESE MEDICINE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHT1100 INTRODUCTION TO HEALTH ENHANCEMENT</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT1101 ACUPUNCTURE POINT LOCATION 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>RBM1515 ANATOMY AND PHYSIOLOGY 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT1005 CHINESE MEDICAL DIAGNOSIS AND PATHOGENESIS 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHT1007 CHINESE PHARMACOPEIA</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT1009 INTRO TO CHINESE MEDICINE CLINICAL PRACT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHT1201 ACUPUNCTURE POINT LOCATION 2</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>RBM1525 ANATOMY AND PHYSIOLOGY</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>RBM1910 MICROBIOLOGY FOR CHINESE MEDICINE PRACTITIONERS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>Year Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT2003 CHINESE MEDICAL DIAGNOSIS AND PATHOGENESIS 2</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHT2009 PHARMACOPEIA AND DISPENSING</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHT2111 CHINESE MEDICINE CLINICAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHT2100 FORMULAE AND STRATEGIES 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT2104 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RBM2911 PATHOPHYSIOLOGY 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT2200 HEALTH ENHANCEMENT (YANG SHENG)</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT2200 FORMULAE AND STRATEGIES 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT2202 ACUPUNCTURE THEORY SYSTEMS AND METHODS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT2203 CHINESE MEDICINE CLINICAL PRACTICE 2</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>HHT2205 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RBM2912 PATHOPHYSIOLOGY 2</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Year Three</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHT3100 CHINESE MEDICAL MICRO-SYSTEMS</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHT3103 CHINESE MEDICINE CLINICAL PRACTICE 3</td>
<td>16</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>HHT3104 MAJOR CLASSICS – SHANG HAN LUN &amp; WENG BING 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
</tbody>
</table>

151
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee (AU$) (AU$) (AU$)

HHT3106 INTERNAL MEDICINE 1 6 0.0630 2 $359 $448 $798
HHT3108 CHINESE MEDICINE THERAPEUTIC APPLICATIONS 1 6 0.0630 2 $359 $448 $798
RBM3921 WESTERN MEDICAL DIAGNOSIS AND INTERVENTIONS 1 6 0.0630 2 $359 $448 $798

Semester Two
HHT3003 COUNSELLING SKILLS FOR CHINESE MEDICAL PRACTICE 8 0.0830 1 $332 $415 $950
HHT3105 MAJOR CLASSICS-SHANG HAN LUN WENG BING 2 6 0.0630 2 $359 $448 $798
HHT3203 CHINESE MEDICINE CLINICAL PRACTICE 4 16 0.1670 2 $951 $1,189 $2,116
HHT3207 INTERNAL MEDICINE 2 6 0.0630 2 $359 $448 $798
HHT3111 CHINESE MEDICINE THERAPEUTIC APPLICATIONS 2 6 0.0630 2 $359 $448 $798
RBM3922 WESTERN MEDICAL DIAGNOSIS AND INTERVENTIONS 2 6 0.0630 2 $359 $448 $798

Year Four
Semester One
HHT4002 RESEARCH METHODS FOR CHINESE MEDICINE 6 0.0630 2 $359 $448 $798
HHT4108 CHINESE MEDICINE TRAUMATOLOGY 6 0.0630 2 $359 $448 $798
HHT4100 CASE CONFERENCING AND CLINICAL ISSUES 1 6 0.0630 0 $252 $252 $720
HHT4101 CHINESE MEDICINE OBSTETRICS AND GYNAECOLOGY 6 0.0630 2 $359 $448 $798
HHT4103 CHINESE MEDICINE CLINICAL INTERNSHIP 1 16 0.1670 2 $951 $1,189 $2,116
RBM4923 WESTERN MEDICAL DIAGNOSIS AND INTERVENTIONS 3 8 0.0830 2 $473 $591 $1,052

Semester Two
HHT4004 PROFESSIONAL ISSUES FOR CHINESE MEDICAL PRACTICE 6 0.0630 2 $359 $448 $798
HHT4200 CASE CONFERENCING AND CLINICAL ISSUES 2 6 0.0630 0 $252 $252 $720
HHT4201 CHINESE MEDICINE PAEDIATRICS 6 0.0630 2 $359 $448 $798
HHT4203 CHINESE MEDICINE DERMATOLOGY 6 0.0630 2 $359 $448 $798
HHT4204 CHINESE MEDICINE CLINICAL INTERNSHIP TWO 16 0.1670 2 $951 $1,189 $2,116
RBM4924 WESTERN MEDICAL DIAGNOSIS AND INTERVENTIONS 4 8 0.0830 2 $473 $591 $1,052

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 TRADITIONAL CHINESE MEDICINE (ACUPUNCTURE)
Course Code: HBAO
Course Objectives
Course Duration One year full time or part time equivalent
Admission Requirements

Course Structure
Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee (AU$) (AU$) (AU$)
HHR3254 ACUPUNCTURE AND MOXIBUSTION: CLINICAL MEDICINE 2 8 0.0830 2 $473 $591 $1,052
HHR3124 ACUPUNCTURE AND MOXIBUSTION: MICROSYSTEMS 8 0.0830 2 $473 $591 $1,052
HHT4114 EMERGENCY MEDICINE 8 0.0830 2 $473 $591 $1,052
HHK4174 ACUPUNCTURE AND MOXIBUSTION: CLINICAL INTERNSHIP 1 24 0.2500 2 $1,424 $1,780 $3,168
HHR3234 ACUPUNCTURE AND MOXIBUSTION: THERAPEUTIC APPLICATIONS 8 0.0830 3 $553 $692 $1,383
HHR4114 A & M CLINICAL MEDICINE 3 8 0.0830 2 $473 $591 $1,052
HHT4275 RESEARCH METHODS FOR ACUPUNCTURE 8 0.0830 2 $473 $591 $1,052
HHA4175 ACUPUNCTURE AND MOXIBUSTION: CLINICAL INTERNSHIP 2 24 0.2500 2 $1,424 $1,780 $3,168

BACHELOR OF HEALTH SCIENCE – CHINESE MEDICINE
Course Code: HBAT Acupuncture Stream
HBHE Chinese Herbal Medicine Stream
(Remaining units for continuing students only. Courses not available after 2006.)

Course Structure
Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee (AU$) (AU$) (AU$)
Year Four
Semester One
HHT4100 CASE CONFERENCING AND CLINICAL ISSUES 1 6 0.0630 0 $252 $252 $720
HHT4002 RESEARCH METHODS FOR CHINESE MEDICINE 6 0.0630 2 $359 $448 $798
HHT4003 CHINESE MEDICAL SPECIALTIES 6 0.0630 2 $359 $448 $798
HKH4001 TREATMENT OF MUSCULO-SKELETAL DISORDERS 6 0.0630 2 $359 $448 $798
HKH4002 CHINESE MEDICAL SPECIALTIES: ACUPUNCTURE 8 0.0830 2 $473 $591 $1,052
HKH4010 CHINESE MEDICINE CLINICAL INTERNSHIP 1 – ACUPUNCTURE MAJOR 16 0.1670 2 $951 $1,189 $2,116

152
SCHOOL OF HEALTH SCIENCES

153

Credit Point EFTSL SC Band Pre 2005 (A$) From 2005 (A$) Full Fee (A$)

Semester Two

HHT4200 CASE CONFERENCING AND CLINICAL ISSUES 2 6 0.0630 0 $252 $252 $720
HHT4004 PROFESSIONAL ISSUES FOR CHINESE MEDICAL PRACTICE 6 0.0630 2 $359 $448 $798
HHT4005 CHINESE MEDICINE ACUTE INTERVENTIONS 6 0.0630 2 $359 $448 $798
HKK4004 SCHOOLS OF THOUGHT IN ACUPUNCTURE 6 0.0630 2 $359 $448 $798
HKK4020 CHINESE MEDICINE CLINICAL INTERNSHIP 2 – ACUPUNCTURE MAJOR 24 0.2500 2 $1,424 $1,780 $3,168

Clinical Training
Teaching clinics usually operate 50 weeks per year, and students will be required to attend clinical sessions outside of semester hours to maintain a public service and provide continuity of patient care.

Graduation Requirements

BACHELOR OF HEALTH SCIENCE – CLINICAL DERMAL THERAPIES (I)

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.

Year 2

Semester Three

Credit Point EFTSL SC Band Pre 2005 (A$) From 2005 (A$) Full Fee (A$)

HHD3103 NUTRITION FOR HEALTH AND WELL-BEING 12 0.1250 2 $712 $890 $1,584
HHD3104 GRADUATING SEMINAR 12 0.1250 2 $712 $890 $1,584
HHD3200 CLINICAL PRACTICE 2 12 0.1250 2 $712 $890 $1,584
HHD3330 DERMAL TECHNIQUES 3 12 0.1250 2 $712 $890 $1,584

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 HEALTH SCIENCE (CHINESE MEDICINE & CLINICAL SCIENCES)

**Course Code:** HBDH Chinese Herb specific (Year 5)

**Course Objectives:**
- 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.

#### 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 Fee (AU$)</th>
<th>From 2005 Fee (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHA1171 ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>HHO1171 OSTEOPATHIC SCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHP1171 PHYSIOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHU1171 CLINICAL PRACTICUM 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RMS1171 BIOCHEMISTRY 1 (OSTEOPATHY)</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RBF1170 CELL STRUCTURE AND FUNCTION</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$356</td>
<td>$445</td>
<td>$792</td>
</tr>
<tr>
<td>Semester Two</td>
<td></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>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>HHD1271 CLINICAL DIAGNOSIS &amp; MANAGEMENT 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHO1272 OSTEOPATHIC SCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHU1272 CLINICAL PRACTICUM 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHY1271 PATHOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RMS1272 BIOCHEMISTRY (OSTEOPATHY) 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
</tbody>
</table>

**Year Two**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</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>HHA2173 ANATOMY 3</td>
<td>8</td>
<td>0.0830</td>
<td>3</td>
<td>$553</td>
<td>$692</td>
<td>$1,383</td>
</tr>
<tr>
<td>HHC2171 BIOMECHANICS 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHD2172 CLINICAL DIAGNOSIS &amp; MANAGEMENT 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHO2173 OSTEOPATHIC SCIENCE 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHP2172 PHYSIOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHU2173 CLINICAL PRACTICUM 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHY2172 PATHOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
</tbody>
</table>

**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 SCIENCE – CLINICAL SCIENCES (I)

**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

**Year One**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</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>HHA1171 ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>HHO1171 OSTEOPATHIC SCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHP1171 PHYSIOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHU1171 CLINICAL PRACTICUM 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RMS1171 BIOCHEMISTRY 1 (OSTEOPATHY)</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RBF1170 CELL STRUCTURE AND FUNCTION</td>
<td>6</td>
<td>0.0625</td>
<td>2</td>
<td>$356</td>
<td>$445</td>
<td>$792</td>
</tr>
<tr>
<td>Semester Two</td>
<td></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>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>HHD1271 CLINICAL DIAGNOSIS &amp; MANAGEMENT 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHO1272 OSTEOPATHIC SCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHU1272 CLINICAL PRACTICUM 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHY1271 PATHOLOGY 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>RMS1272 BIOCHEMISTRY (OSTEOPATHY) 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
</tbody>
</table>

**Year Two**

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</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>HHA2173 ANATOMY 3</td>
<td>8</td>
<td>0.0830</td>
<td>3</td>
<td>$553</td>
<td>$692</td>
<td>$1,383</td>
</tr>
<tr>
<td>HHC2171 BIOMECHANICS 1</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHD2172 CLINICAL DIAGNOSIS &amp; MANAGEMENT 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHO2173 OSTEOPATHIC SCIENCE 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHP2172 PHYSIOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>HHU2173 CLINICAL PRACTICUM 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHY2172 PATHOLOGY 2</td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
</tbody>
</table>
## School of Health Sciences

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</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>Two</td>
<td>HHA2274</td>
<td>ANATOMY</td>
<td>4</td>
<td>8</td>
<td>0.0830</td>
<td>$553</td>
<td>$692</td>
<td>$1,383</td>
</tr>
<tr>
<td></td>
<td>HHC2272</td>
<td>BIOMECHANICS</td>
<td>2</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHD2273</td>
<td>CLINICAL DIAGNOSIS &amp; MANAGEMENT</td>
<td>3</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHO2274</td>
<td>OSTEOPATHIC SCIENCE</td>
<td>4</td>
<td>8</td>
<td>0.0830</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td></td>
<td>HHP2273</td>
<td>PHYSIOLOGY</td>
<td>3</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHU2274</td>
<td>CLINICAL PRACTICUM</td>
<td>4</td>
<td>8</td>
<td>0.0830</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td></td>
<td>HHY2273</td>
<td>PATHOLOGY</td>
<td>3</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td>Three</td>
<td>HHC3173</td>
<td>BIOMECHANICS</td>
<td>3</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHD3174</td>
<td>CLINICAL DIAGNOSIS &amp; MANAGEMENT</td>
<td>4</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHO3175</td>
<td>OSTEOPATHIC SCIENCE</td>
<td>5</td>
<td>8</td>
<td>0.0830</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td></td>
<td>HHP3174</td>
<td>PHYSIOLOGY</td>
<td>4</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHS3171</td>
<td>PSYCHOLOGY AND SOCIAL SCIENCES</td>
<td>1</td>
<td>6</td>
<td>0.0630</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
</tr>
<tr>
<td></td>
<td>HHU3175</td>
<td>CLINICAL PRACTICUM</td>
<td>5</td>
<td>8</td>
<td>0.0830</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td></td>
<td>HHY3174</td>
<td>PATHOLOGY</td>
<td>4</td>
<td>8</td>
<td>0.0630</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Two</td>
<td>HHA3275</td>
<td>ANATOMY</td>
<td>5</td>
<td>6</td>
<td>0.0630</td>
<td>$420</td>
<td>$525</td>
<td>$1,050</td>
</tr>
<tr>
<td></td>
<td>HHC3274</td>
<td>BIOMECHANICS</td>
<td>4</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHD3270</td>
<td>PROFESSIONAL ETHICS</td>
<td>6</td>
<td>8</td>
<td>0.0830</td>
<td>$332</td>
<td>$415</td>
<td>$950</td>
</tr>
<tr>
<td></td>
<td>HHO3276</td>
<td>OSTEOPATHIC SCIENCE</td>
<td>5</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHP3275</td>
<td>PHYSIOLOGY</td>
<td>5</td>
<td>6</td>
<td>0.0630</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
<tr>
<td></td>
<td>HHS3272</td>
<td>PSYCHOLOGY &amp; SOCIAL SCIENCES</td>
<td>2</td>
<td>6</td>
<td>0.0630</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
</tr>
<tr>
<td></td>
<td>HHU3276</td>
<td>CLINICAL PRACTICUM</td>
<td>6</td>
<td>8</td>
<td>0.0830</td>
<td>$473</td>
<td>$591</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

This course is for continuing students only.

#### Course Objectives
- 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>Year One</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><strong>Pre-2007</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3222 INTEGRATION OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3301 ISSUES IN PREHOSPITAL HEALTH SERVICE DELIVERY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3401 PREHOSPITAL ETHICAL AND LEGAL ISSUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3122 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3211 INTEGRATION OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3501 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Elective x 12 credit points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post 2007</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3121 ADVANCED PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3123 ADVANCED PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3124 PRACTITIONER HEALTH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3125 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td><strong>Year 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3226 MAJOR INCIDENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3227 PARAMEDIC EVIDENCE BASED HEALTH CARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3228 ADVANCED PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB3229 PARAMEDIC PRACTicum</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>

## General Electives

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.

## 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 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 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>RBM1101 BIOSCIENCE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB1113 PRE-HOSPITAL ETHICAL AND LEGAL ISSUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB1111 PROFESSIONAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB1112 PARAMEDIC CLINICAL PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>RBM1211 BIOSCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB1212 PROFESSIONAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HFB1201 HEALTH ORGANISATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>
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.

Course Duration

International students and others required to demonstrate a basic level English proficiency are required to have an IELTS level commensurate with entry requirements will be as per the requirements of the Diploma of Beauty Therapy.

Admission Requirements

The academic rationale for this program relates to five main areas:

- 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 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.

- 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 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.

- 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 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.

The academic rationale for this program relates to five main areas:

- 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 Structure

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.

- 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.

Year 2

<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>HFB1213 PARAMEDIC CLINICAL PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2114 PARAMEDIC SCIENCE 1</td>
<td>48</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2115 MENTAL HEALTH AND ILLNESS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>AHE2111 PRACTITIONER HEALTH 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2116 PARAMEDIC CLINICAL PRACTICE 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2217 PARAMEDIC SCIENCE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMB2218 PRACTITIONER HEALTH 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2219 SPECIAL POPULATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2220 PARAMEDIC CLINICAL PRACTICE 4</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Year 3

<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>HFB3121 ADVANCED PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3123 ADVANCED PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3124 PRACTITIONER HEALTH 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3125 RESEARCH IN PARAMEDIC PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3226 MAJOR INCIDENTS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3227 PARAMEDIC EVIDENCE BASED HEALTH CARE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3228 ADVANCED PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3229 PARAMEDIC PRACTICUM</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

BACHELOR OF HEALTH SCIENCE (DERMAL THERAPIES)

Course Code: HBDT

Course Objectives

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.

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.

Feedback from recent graduates and collaboration with other health professionals indicate that development and implementation of the new course is both timely and appropriate.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

HHD3224 DERMATOLOGY  12  0.1250  2  $712  $890  $1,584
HHD3234 PEELS PROCEDURE  12  0.1250  2  $712  $890  $1,584

Year 4
Semester 1
HHD4104 DERMAL CLINICAL PRACTICE 1  6  0.0625  2  $356  $445  $792
HHD4114 ADVANCED HEALTH RESEARCH PERSPECTIVES  12  0.1250  2  $712  $890  $1,584
HHD4124 LYMPHATIC PROCEDURES  6  0.0625  2  $356  $445  $792
HHD4134 LASER AND LIGHT PROCEDURES  12  0.1250  2  $712  $890  $1,584
HHD4144 INDEPENDENT RESEARCH 1  12  0.1250  2  $712  $890  $1,584

Semester 2
HHD4204 DERMAL CLINICAL PRACTICE 2  6  0.0625  2  $356  $445  $792
HHD4214 NUTRITION AND DERMAL THERAPIES  6  0.0625  2  $356  $445  $792
HHD4224 DERMAL CLINICAL PRACTICE 3  12  0.1250  2  $712  $890  $1,584
HHD4234 PROFESSIONALISM IN DERMAL PRACTICE  12  0.1250  2  $712  $890  $1,584
HHD4244 INDEPENDENT RESEARCH 2  12  0.1250  2  $712  $890  $1,584

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
Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

Semester 1
HHD5135 SPECIALISED DERMAL ANATOMY AND PHYSIOLOGY  12  0.1250  2  $712  $890  $1,584
HHD5145 ADVANCED DERMAL APPLICATIONS 1  12  0.1250  2  $712  $890  $1,584
HHD5155 PROFESSIONAL DERMAL ISSUES 1  12  0.1250  2  $712  $890  $1,584
HHD5165 ADVANCED CLINICAL PRACTICE 1  12  0.1250  2  $712  $890  $1,584

Semester 2
HHD5235 DERMAL PHARMACOLOGY  12  0.1250  2  $712  $890  $1,584
HHD5245 ADVANCED DERMAL APPLICATIONS 2  12  0.1250  2  $712  $890  $1,584
HHD5255 PROFESSIONAL DERMAL ISSUES 2  12  0.1250  2  $712  $890  $1,584
HHD5265 ADVANCED CLINICAL PRACTICE 2  12  0.1250  2  $712  $890  $1,584

GRADUATE DIPLOMA IN EMERGENCY MANAGEMENT
Course code: HGMT

Course Objectives
This course is offered over two semester full time or part time equivalent.

Admission Requirements

Course Structure
Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

Semester 1
HHP5101 FUNDAMENTALS OF EMERGENCY MANAGEMENT  12  0.1250  2  $712  $890  $1,584
HHP5102 DISASTER PLANNING AND PREVENTION  12  0.1250  2  $712  $890  $1,584
HHP5103 DISASTER PREPAREDNESS  12  0.1250  2  $712  $890  $1,584
HHP5104 DISASTER RESPONSE  12  0.1250  2  $712  $890  $1,584

Semester 2
HHP5205 SPECIALIST RESPONSE IN DISASTERS  12  0.1250  2  $712  $890  $1,584
HHP5206 DISASTER RECOVERY  12  0.1250  2  $712  $890  $1,584
HHP5207 LOGISTICS & SECURITY  12  0.1250  2  $712  $890  $1,584
HHP5208 DISASTER RESEARCH  12  0.1250  2  $712  $890  $1,584

BACHELOR OF HEALTH SCIENCE (HONOURS)
Course Code: HHHO

Course Objectives
The honours year 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.

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
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 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHH4111 RESEARCH METHODS IN HEALTH SCIENCE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHH4131 HEALTH HONOURS THESIS</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
<td>$3,168</td>
</tr>
</tbody>
</table>

**Semester Two**

| HHH4241 HEALTH HONOURS THESIS 2                                              | 24           | 0.2500| 2       | $1,424         | $1,780         | $3,168         |
| HHH4251 HEALTH HONOURS THESIS 3                                              | 24           | 0.2500| 2       | $1,424         | $1,780         | $3,168         |

**MASTER OF HEALTH SCIENCE (BY MINOR THESIS) (I)**

**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.

<table>
<thead>
<tr>
<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>HFR0001 ADVANCED QUANTITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
<tr>
<td>HFR0002 ADVANCED QUALITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
<tr>
<td>HHT1127 MINOR THESIS – FULL TIME</td>
<td>12</td>
<td>0.3330</td>
<td>2</td>
<td>$1,996</td>
<td>$2,370</td>
<td>$4,219</td>
</tr>
</tbody>
</table>

**Semester Two**

| HHT1137 MINOR THESIS – FULL TIME                                             | 12           | 0.5000| 2       | $2,847         | $3,559         | $6,336         |

**HHT1147 MINOR THESIS – PART TIME**

**HHT1157 MINOR THESIS (PART TIME)**

**HHT1158 MINOR THESIS PART TIME**

**HHT1159 MINOR THESIS E PART TIME**

**MASTER OF HEALTH SCIENCE – OSTEOPATHY (I)**

**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;
- skills in a full range of osteopathic techniques;
- an awareness of the application of osteopathic principles relevant to patient management;
- the ability to interact with other health care providers and advisers for the benefit of the patient, including an awareness of the need to gain informed consent;
- communication skills related to the patient and other persons, to maintain inter-professional co-operation and respect;
- an awareness of the cost effectiveness of osteopathic treatment;
- an awareness of the support systems that are available and an ability to take part in a multi-practitioner research program;
- an awareness of the need for continuing self education;
- clinical proficiency and an ability to manage all aspects of osteopathic patient care; and
- an awareness of their professional and personal responsibilities and an ability to effectively organise and manage their working environment.

159
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Admission Requirements
To qualify for admission to the course applicants must have satisfactorily completed the Bachelor of Science – Clinical Sciences, or equivalent.
Students will be required to undergo a Victoria Police check before commencing clinical placement units. Police checks need to be conducted annually throughout the programme. Prospective and continuing students should be aware that not passing relevant police checks may restrict access to clinical placements necessary for graduation.
At the commencement of the course students must complete the Level 2 First Aid Certificate update.

Course Duration
The course is offered over two years on a full time basis.

Course Structure

<table>
<thead>
<tr>
<th>Year One</th>
<th>Semester One</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>HHD4185 CLINICAL DIAGNOSIS AND MANAGEMENT</td>
<td>5</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHL4181 RESEARCH</td>
<td>1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHO4187 OSTEOPATHIC SCIENCE</td>
<td>7</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHS4183 PSYCHOLOGY AND SOCIAL SCIENCES</td>
<td>3</td>
<td>12</td>
<td>0.0830</td>
<td>1</td>
<td>$332</td>
<td>$415</td>
<td>$950</td>
</tr>
<tr>
<td>HHU4187 CLINICAL PRACTICUM</td>
<td>7</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Semester Two</td>
<td>HHD4286 CLINICAL DIAGNOSIS AND MANAGEMENT</td>
<td>6</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HHL4282 RESEARCH</td>
<td>2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHO4288 OSTEOPATHIC SCIENCE</td>
<td>8</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHU4288 CLINICAL PRACTICUM</td>
<td>8</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HHY4285 PATHOLOGY</td>
<td>5</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>Year Two</td>
<td>Semester One</td>
<td>HHD5187 CLINICAL DIAGNOSIS AND MANAGEMENT</td>
<td>7</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
</tr>
<tr>
<td>HHL5183 RESEARCH</td>
<td>3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHO5189 OSTEOPATHIC SCIENCE</td>
<td>9</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHU5189 CLINICAL PRACTICUM</td>
<td>9</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td>HHD5288 CLINICAL DIAGNOSIS AND MANAGEMENT</td>
<td>8</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>HHL5284 RESEARCH</td>
<td>4</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHO5280 OSTEOPATHIC SCIENCE</td>
<td>10</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HHU5280 CLINICAL PRACTICUM</td>
<td>10</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

*Total Semester Hours for Unit
Check subject details with course co-ordinator.

Clinical Practicum
Clinical practicum is direct student/patient contact supervised by registered osteopaths and medical practitioners. In order to register as an osteopath, students must complete the minimum attendance requirements for clinical units over the full five years of the combined Bachelor of Science-Clinical Sciences and Master of Health Science-Osteopathy courses. This will be achieved cumulatively by an increasing commitment of time to clinically based learning as students progress through the course and their clinical skills increase.
As the teaching clinics are required to operate 50 weeks per year, in order to maintain a public service and provide essential continuity of patient care, students will be expected to supplement any deficit in clinical practicum hours outside semester hours. The arrangement of clinical hours will be flexible and may vary from year to year dependent upon resources, patient availability and student development.
During the clinical practicum students will develop and enhance the following skills within the supervised clinical setting: interpersonal and communication skills; history taking; general observation; clinical methods; general medical and osteopathic examination; data analysis and interpretation; pathological diagnosis; radiological diagnosis; special investigations; osteopathic treatment and management; and professional behaviour and ethics.
School of Health Sciences/Osteopathy Website:
http://www.vu.edu.au/Faculties/Health_Engineering_and_Science/Schools/Health_Sciences/Osteopathy

Professional Recognition
Registration and regulation of osteopaths is a function of State Registration Boards in a similar way to the regulation of other health professions such as medicine and dentistry. Graduates of this course will be eligible to apply to be registered as osteopaths in Victoria. The course also has the support of the Australian College of Physical Medicine.

MASTER OF HEALTH SCIENCE (BY RESEARCH) (I)

Course Code: HRNS

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;
- 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
(This course is currently under review.)

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 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>HFB2100 PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2101 PARAMEDIC CLINICAL 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2102 FUNDAMENTALS OF PARAMEDICINE 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2103 PARAMEDIC SCIENCES 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB2204 PARAMEDIC PRACTICE 3</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2205 PARAMEDICAL INTERNSHIP</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2206 FUNDAMENTALS OF PARAMEDICINE 4</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB2207 PARAMEDIC SCIENCES 4</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year Three</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>HFB3800 PARAMEDIC PROFESSIONAL WRITING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFB3122 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</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.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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 2007.

**IMPORTANT NOTE:** Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

---

**HFB1101 FUNDAMENTALS OF PARAMEDICINE 1**

**Campus** St Albans, Online

**Prerequisite(s)** Nil

**Content** This subject introduces the fundamentals of paramedicine. Students are introduced to the anatomical, physiological, biochemical, and pathophysiological basis of care from paramedic perspectives. Analysis of cell structures, types and groups culminates in examinations of the musculoskeletal and integumentary systems. Brief pathophysiological details from a limited range of acute and chronic conditions encountered by paramedics are also included. Topics studied in this subject may be interchangeable with those in HFB1205 Fundamentals of Paramedicine 2, HFB2101 Fundamentals of Paramedicine 3 and HFB2106 Fundamentals of Paramedicine 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** Online test given in two parts (20%); essay (1200 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%.

---

**HFB1102 PARAMEDIC SCIENCES 1**

**Campus** St Albans, Online

**Prerequisite(s)** Nil

**Content** This subject is concerned with developing the students’ understanding of the sciences underpinning paramedic practice. An introduction to microbiology and pharmacology related to paramedic practice provides the theoretical explanations for specific paramedic practices taught in later subjects. Pharmacological concepts such as route of administration, distribution, metabolism and excretion of drugs are introduced and developed with specific reference to paramedic practice. Topics studied in this subject may be interchangeable with those in HFB1205 Fundamentals of Paramedicine 2, HFB1101 Paramedic Sciences 3 and HFB2207 Paramedic Sciences 4.

**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 online or workbook activities including one online test (Microbiology and Pharmacology combined) (30%); media review (1000 words) (20%); essay (1200 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%.

---

**HFB1111 PROFESSIONAL PRACTICE 1**

**Campus** St Albans

**Prerequisites** Nil

**Co-requisites**

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

- Describe and discuss the roles and responsibility of the paramedic
- Describe medical direction for emergencies medical services.
- Discuss the roles and responsibilities of professional organisations in pre-hospital care.
- 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
- 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
- Understanding special populations
  - Cultural and religious differences
  - Children
  - The older population
  - Gangs
  - Caring for disabled people
  - Prejudice
  - Attention seeking behaviours
- 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
- Service orientation and the nature of routine
  - Coping with waiting
  - Pride and professionalism
  - Service orientation
  - Customer service and pursuit of quality
  - Conflict resolution
- Stress and wellness
  - Stress and its management
  - Cumulative stress
  - Critical incident stress
  - Signs, symptoms, susceptibility, and overcoming stress

**Content** This unit will cover:

- The human component in emergency medical services
- Understanding emotions
- Self-awareness
- Understanding others
- Effective interpersonal communication
- Death and dying
- Special populations and challenges
- Service and orientation
- Stress and wellness


**Recommended Reading** Dermoocoeur KB (1996) Streetsense communication, safety, and control 3rd edn. Redmond, WA
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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:
- apply principles of consent and confidentiality when obtaining and documenting a health history.
- demonstrate the process of history taking in order to obtain a comprehensive health history, using effective communication techniques.
- Demonstrate the use of, and differentiate between, facilitation, reflection, clarification, empathetic responses, confrontation and interpretation.
- recognise scene hazards and potential hazards.
- describe methods of making a scene safe
- relate the importance of accurate scene assessment and the importance of early and accurate communication.
- describe and demonstrate methods of assessing medical and trauma patients
- describe and demonstrate methods of assessing the conscious and the apparently unconscious patient
- describe and demonstrate primarily and secondly patient surveys
- Describe and demonstrate the use of oxygen delivery systems and assisted ventilation to correct hypoxia in a hypoventilation or apnic patient
- Satisfactorily demonstrate cardiopulmonary resuscitation
- Demonstrate the ability to apply with body substance isolation guidelines
- Preform the assessment of a patient expected, or identified as having, infectious or communicable disease.
- Demonstrate the proper disposal of contaminated wastes and supplies
- Demonstrate disinfection of patient care equipment
- 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
- Explain biomechanical principals in the lifting and manual handling of patients and patient care equipment
- Identify strategies to minimise manual handling injuries in the workplace
- Demonstrate effective and safe patient lifting techniques using the following lifting aids:
  - stretcher
  - carry chair
  - Spine board
  - Scope stretcher
  - Slide board
  - Kendrick extraction device (KED)
- Identify signs and symptoms of a fracture, sprain, strain, musculoskeletal tear/rupiture
- Demonstrate the correct methods of splinting pelvic and limbs fractures
- Demonstrate the pre-hospital management of severe musculoskeletal injury
- Deliver paramedic clinical skills in an appropriate clinical setting

Content 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, documentation技巧
- Management of musculoskeletal injuries
- Basic life support
- Cardiopulmonary resuscitation
- Minimum of forty (40) hours placement in an appropriate clinical setting

Ambulance Services Victoria, Melbourne.
Ambulance Services Victoria.

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 cased 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 the successful completion of this subject the student will:
- Demonstrate the correct methods for the delivery of pre-hospital pharmacology using selected routes of administration.
- Correctly calculate drug dosages and volumes.
- Describe and demonstrate the appropriate pre-hospital assessment and management of patients experiencing pain in the pre-hospital setting.
- Describe and demonstrate the appropriate assessment techniques used with paediatric patients in the pre-hospital setting.
- Describe the anatomical, physiological and psychosocial development of infants and children.
- Describe the methods and strategies for training small groups and mentoring in the paramedic workplace.
- Evaluate the effectiveness and appropriateness of clinical decisions and actions.
- Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management and mentoring and training.

Content This subject will contain:
- Drug administration.
- Practical pharmacology.
- Approach to the paediatric patient.
- Pain assessment and management.
- Clinical mentoring.
- Instruction and training of small groups.


Recommended Reading
Class Contact Eighty eight (88) 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 (40) 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 clinical mentoring and instruction will be assessed through group discussion and problem solving exercises. Students are required to complete a
HFB1201 HEALTH ORGANISATIONS
Campus St Albans
Prerequisites Professional Practice 1
Co-requisites
Learning Outcomes
• Apply an understanding of health services management in the context of Australian society and the Australian health care system;
• Recognise the key elements that determine health policy;
• Demonstrate the importance of quality, access to health services and good management in the efficient provision of health care;
• Appreciate the range of settings (clinic, community, society) in which health promotion activities take place and the range of relevant interventions (bio-, psycho-, socio-environmental, behavioral and biomedical);
• Understand the importance of knowledge of organisational behaviour to organisational effectiveness
• Discuss influences on the development of management theories;
• Recognise the relationship between power and knowledge in decision-making in healthcare settings
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
HFB1203 PARAMEDIC PRACTICE 1
Campus St Albans
Prerequisite(s) HFB1801 Out of Hospital Practice and HFB1802 Prehospital Clinical 1; or equivalents.
Corequisite(s) HFB1204 Paramedic Clinical 1; or equivalent.
Content This subject builds on HFB1801 Out of Hospital Practice and continues to develop the students' understanding and practice of paramedic emergency management. A problem-oriented approach extends students' paramedic knowledge and introduces paramedic protocols and practice requirements of individualizing patient care. Skill development is introduced and specifically integrated into particular paramedic medical and surgical case studies that highlight the nervous, respiratory, cardiovascular, and endocrine systems. Basic principles of applied clinical pharmacology, e.g., drug administration, and basic electrocardiography and interpretation and an introduction to advanced life support procedures including manual defibrillation are also included. Topics in this subject may be re-changed with HFB2100 Paramedic Practice 2 and HFB2204 Paramedic Practice 3.
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
Proficiency multi-station practical and theory examination (pass/fail) (hurdle requirement); portfolio (50%); final 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 and resubmitted once only. Proficiency standard must be obtained on any re-attempted multi-station examination. Maximum possible marks to be obtained on re-submission of the 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.
HFB1204 PARAMEDIC CLINICAL 1
Campus St Albans, Off Campus
Prerequisite(s) HFB1801 Out of Hospital Practice and HFB1802 Prehospital Clinical; or equivalents.
Corequisite(s) HFB1203 Paramedic Practice 1; or equivalent.
Content This subject is designed to facilitate the application of theory and skills presented in HFB1203 Paramedic Practice 1. Students participate in the delivery of health care initially in classroom laboratory settings and later in selected clinical settings. The clinical focus is on developing skills of assessment and care of people who require acute emergency medical and surgical care. Routes of medication administration are included and the nervous, respiratory, cardiovascular, and endocrine systems are presented in greater detail.
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 at least sixty 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.
HFB1205 FUNDAMENTALS OF PARAMEDICINE 2
Campus St Albans, Online
Prerequisite(s) HFB1101 Fundamentals of Paramedicine 1; or equivalent.
Content This subject continues the topics presented in HFB1101 Fundamentals of Paramedicine 1 and introduces examinations of the anatomy, physiology and pathophysiology of the nervous, respiratory, cardiovascular and endocrine systems. Function is explored in detail from discrete, interactive and holistic perspectives. Topics studied in this subject may be re-changed with those in HFB1101 Fundamentals of Paramedicine 1, HFB2102 Fundamentals of Paramedicine 3 and HFB2206 Fundamentals of Paramedicine 4. 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%.
HFB1206 PARAMEDIC SCIENCES 2
Campus St Albans, Online
Prerequisite(s) HFB1102 Paramedic Sciences 1; or equivalent.
Content This subject presents the pharmacological aspects of dysfunction in the nervous, respiratory, cardiovascular and gastrointestinal systems and relates these aspects to paramedic practice and out-of-hospital settings. The concept of host microbe interactions in microbiology introduces students to the body's defense systems and principles of disease and epidemiology. Topics studied in this subject may be re-changed with those in HFB1102 Paramedic Sciences 1, HFB2103 Paramedic Sciences 3 and HFB2207 Paramedic 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 This subject will contain: a workbook or online activities including one online test (Microbiology and Pharmacology combined) (30%); online test (20%); 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 (weekly activities and online test) 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%.

HFB1212 PROFESSIONAL PRACTICE 2
Campus St Albans
Prerequisites Professional Practice 1
Co-requisites

Learning Outcomes Upon the successful completion of this subject the student will:

- Understand the ways in which the sociological approach to health differs from the more traditional biomedical approaches
- Describe and discuss the role of prominent social theorists, as they pertain to models of the sociology of health and medicine
- Define and discuss the concepts of ‘health’ and ‘illness’
- Describe and discuss the role of the ‘sick’ person in various socioeconomic, religious and cultural contexts
- Compare and contrast the biomedical models’ approach and treatment of various illnesses, to that of the sociological perspective
- Discuss how a society’s view or model of health influences the structure of the health system, and the role of ‘culture’ in the provision of health care services.
- Describe and discuss the different sociological models of death and dying within the context of different socioeconomic, religious and cultural groups, and compare how practices differ between groups
- Discuss and describe the various models of grief within the context of different socioeconomic, religious and cultural groups
- Discuss the prevalence and treatment of disabilities within the context of different socioeconomic, religious and cultural groups
- Discuss the concept of sociological, religious and cultural construction and moulding of what are traditionally considered ‘biological’ traits, such as gender and age.
- Discuss and describe the patterns of mental illness within society, in the context of a sociological model
- Describe and define multiculturalism as it relates to the Australian society
- Describe the health trends and epidemiology of disease in Australian society as they pertain to different socioeconomic and cultural groups
- Discuss the concept of cultural footprints relevant to current sociological expectations
- 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)
- Discuss how social conditioning influences attitude, perspective and practices in service delivery
- Describe the health concepts / needs of the indigenous community in Australia
- Compare and contrast the health care needs and expectations of differing cultural and religious and minority groups
- Develop an understanding of the relationship between ethnicity and health

Content This subject will contain:

- Past and present sociological perspectives of health and illness
- Biomedical models of health
- The role of the ‘sick’ person
- The influence of society, religion and culture on Health Care Systems
- Cultural, social diversity and multiculturism in Australia
- The role of culture in the provision of health care services
- Social construction of biological traits
- Death, dying and grief
- Mental Illness
- Disabilities in Society
- Indigenous health
- Minority groups
- Epidemiological health trends in Australia
- Inequality and bias in health and illness.

- Ethnicity and Identity
- Principles of conditioning


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 High Distinction through to Fail. This subject has 3 assessment items – written Essay of 1500 – 2000 words; reflective Journal / Case Study of 1500 words based upon experiences gained during clinical placements; and, a written examination of 2 hours.

HFB1213 PARAMEDIC CLINICAL PRACTICE 2
Campus St Albans
Prerequisites Paramedic Clinical Practice 1
Co-requisites

Learning Outcomes Upon the successful completion of this subject the student will:

- Demonstrate the correct methods for the delivery of pre-hospital pharmacology using selected routes of administration.
- Correctly calculate drug dosages and volumes.
- Describe and demonstrate the appropriate pre-hospital assessment and management of patients experiencing pain in the pre-hospital setting.
- Describe and demonstrate the appropriate assessment techniques used with paediatric patients in the pre-hospital setting.
- Describe the anatomical, physiological and psychosocial development of infants and children.
- Describe the methods and strategies for training small groups and mentoring in the paramedic workplace.
- Evaluate the effectiveness and appropriateness of clinical decisions and actions.
- Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management and mentoring and training.

Content This subject will contain:

- Drug administration.
- Practical pharmacology.
- Approach to the paediatric patient.
- Pain assessment and management.
- Clinical mentoring.
- Instruction and training of small groups.


Class Contact Eighty eight (88) 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 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 clinical mentoring and instruction will be assessed through group discussion and problem solving exercises. Students are required to complete a clinical log book and reflective journal whist on clinical placement. All assessment must be attempted and a satisfactory result achieved in all assessment items.

HFB1801 OUT-OF-HOSPITAL PRACTICE
Campus St Albans, Off Campus
Prerequisite(s) Nil
Corequisite(s) HFB1802 Prehospital Clinical; or equivalent.

Content This subject introduces students to out-of-hospital care and the paramedic profession. The subject is divided into three areas. The first area introduces modes of paramedic and out-of-hospital emergency and non-emergency practice. Ambulance operations including written communications in paramedicine, occupational health and safety issues, and an introduction to aspects of law and ethics are presented. The second area introduces paramedic diagnostics, emergency and non-emergency examinations, basic life support, and
elementary management at a systems level of various medical and surgical conditions. The third area introduces trauma and its effects on the body. Throughout the subject, a problem-based learning model is used to promote development of critical thinking and individualized care is emphasized through assessment of patient priorities and care of their families.

**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 self-directed learning activities.

**Assessment**
- Mid semester test (10%) (pass/fail) (hurdle requirement);
- Proficiency multi-station practical and theory examination (pass/fail) (hurdle requirement) (40%); written examination (50%).
- To obtain a Ungraded Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (mid semester test and multi-station examination) may be re-attempted once only. Proficiency standards must be obtained on any re-attempted mid semester test and multi-station examination.
- 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.

**HFB1802 PREHOSPITAL CLINICAL**

**Campus** St Albans, Off Campus

**Prerequisite(s)** Nil

**Corequisite(s)** HFB1801 Out of Hospital Practice; or equivalent

**Content** This subject is designed to facilitate the application of theory and skills presented in HFB1801 Out of Hospital Practice. Students will participate in the delivery of health care in classroom laboratory settings and in selected clinical settings. The clinical focus is on developing skills related to assessment and care of people requiring elementary medical and surgical care, transport and prehospital attention.

**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 forty (40) hours clinical placement in the semester (hurdle requirement), lectures, tutorials, practical sessions and self-directed learning activities. Clinical placement needs to be flexible and may include placements 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.

**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 of patients at home and during emergency medical transport. To build individual and team skills and strengthen the awareness for individualized care, students will work with other students to provide supervised student mentoring. Topics in this subject may be interchanged with HFB1203 Paramedic Practice 1 and HFB2204 Paramedic Practice 4.

**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 self-directed 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 2. 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 interchanged 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 interchanged with those in HFB1102 Paramedic Sciences 1, HFB1206 Paramedic Sciences 2 and HFB2207 Paramedic Sciences 4. Topics will be related directly to paramedic care.

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

Website dingo.vu.edu.au/~paramedics
Spinal trauma
Head and facial trauma
Burns:
Haemorrhage and shock:
Thoracic Trauma
Soft tissue trauma
Thoracic trauma
Musculoskeletal trauma
Haemorrhage and shock
Soft tissue trauma
Burns
Head and facial trauma
Spinal Trauma
Thoracic trauma
Abdominal trauma
Musculoskeletal trauma
Haemorrhage and shock
Soft tissue trauma
Burns
Head and facial trauma
Spinal Trauma
Abdominal trauma
Musculoskeletal trauma
Distinguish between certain types of spinal injury.
Describe pre-hospital assessment of spinal cord injury.
Identify pre-hospital management with the patient with traumatic and non-traumatic spinal cord injuries.
Thoracic Trauma
Discuss the factors and mechanism of injury associated with thoracic trauma.
Describe the mechanism of injury, signs and symptoms and management of skeletal injuries to the chest.
Describe the mechanism of injury, signs and symptoms and pre-hospital management of pulmonary trauma.
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.
Abdominal trauma
Describe mechanisms of injury, signs and symptoms, and complications associated with abdominal solid organ, hollow organ and pelvic organ injuries.
Describe the pre-hospital assessment priorities for a patient suspected of having an abdominal injury.
Outline the pre-hospital care of a patient with abdominal injury.
Musculoskeletal Injury
Describe the features of each class of musculoskeletal injury.
Describe the pre-hospital management principles for selected upper and lower extremity injuries.
Identify pre-hospital management priorities for open fractures, angular fractures and dislocations.
Content This subject will cover the following topics:
Trauma systems and mechanism of injury
Haemorrhage and shock
Soft tissue trauma
Burns
Head and facial trauma
Spinal Trauma
Thoracic trauma
Abdominal trauma
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:
Describe what is meant by mental health.
Explain how the biopsychosocial model relates to mental health.
Elucidate how good mental health may be promoted.
Use ideas from behavioural and cognitive psychology to explain the behaviours of themselves and others. This will include health destructive and health promoting behaviours.
Reflect on their own mental health and on that of others.
Discuss and describe the most prevalent mental disorders in Australia (depression, anxiety, substance misuse, bipolar disorder) and dementia.
Describe how psychosocial and lifestyle factors influence mental health.
Explain how ambulance paramedics should approach and assess patients with a behavioural emergency.
Explore and explain options as to how ambulance paramedics might manage a patient in a behavioural emergency.
• Identify and describe the National and State legislation and ambulance service policies and regulations that apply to patients with a behavioural emergency.
• Integrate this knowledge to participate effectively in relevant role-plays and scenarios.

Content
• Definition of mental health.
• The biopsychosocial model.
• Promoting good mental health (including prevention of mental illness).
• How the biopsychosocial model relates to mental health and the mental illnesses of depression, anxiety, substance misuse, bipolar disorder, schizophrenia and dementia (including how psychosocial and lifestyle factors influence mental health).
• Approaching and assessing patients with a behavioural emergency.
• Options for managing a patient with a medical emergency. (Victorian) Ambulance service guidelines and policies related to behavioural emergencies.

Required Reading Definition of mental health. The biopsychosocial model. Promoting good mental health (including prevention of mental illness). How the biopsychosocial model relates to mental health and the mental illnesses of depression, anxiety, substance misuse, bipolar disorder, schizophrenia and dementia (including how psychosocial and lifestyle factors influence mental health).


Class Contact 4 hours of lectures per week

HFB2116 PARAMEDIC CLINICAL PRACTICE 3
Campus St Albans
Prerequisites HFB2100 Paramedic Clinical Practice 2
Co-requisites

Learning Outcomes Upon the successful completion of this subject the student will:
• Detail and discuss the various types of fluids used in the prehospital setting
• Describe and discuss the indications and contraindications of fluid replacement in the prehospital setting
• Accurately identify patients who would be indicated for fluid replacement therapy.
• Describe and demonstrate the preparation and assembly of an intravenous fluid line.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with external haemorrhage
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with internal haemorrhage
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with a soft tissue injury.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with burns.
• Demonstrate the application of the ‘Rule of Nines’ and ‘Lund and Brower’ methods of burns surface area assessment.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with facial trauma.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with a head injury
• Describe and demonstrate the application of a cervical collar.
• Describe and demonstrate the use of appropriate extrication devices for patients presenting with a spinal injury, including spine boards, scoop stretchers, and the KED.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with thoracic trauma
• Describe and demonstrate the appropriate procedure for decompression of a tension pneumothorax using a variety of methods.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with abdominal injuries.
• Describe and demonstrate the appropriate pre-hospital assessment and management of patients with limb fractures, both complicated and uncomplicated.
• 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.
• Describe, demonstrate and justify the administration of various pharmacological agents related to the management of traumatic injuries.
• Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management.

Content This subject will contain:
• Fluid resuscitation
• Haemorrhage control and shock management.
• Assessment and management of soft tissue injuries.
• Assessment and management of burns.
• Assessment and management of head and facial trauma.
• Assessment and management of spinal and back injuries.
• Assessment and management of thoracic trauma.
• Assessment and management of abdominal trauma.


Class Contact Eighty-eight (88) 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 (40) 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 whilst 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 develop the 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 then 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, obstetrics 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 student mentoring arrangements. The integration of this approach will further facilitate the need for individualised patient care. Topics in this subject may be interleaved with HFB1203 Paramedic Practice 1 or HFB2204 Paramedic Practice 3.

Required Reading To be advised by lecturer.

Subject Hours Eight hours per week for one semester or off Campus equivalent comprising 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
assessments 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 PARAMEDEICAL 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 emphasize and expand upon clinically relevant material obtained during clinical placement.

**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.

**Clinical placement** in the semester (hurdle requirement), lectures, tutorials, practical sessions and self-directed learning activities.

**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; and case presentations will emphasize and expand upon clinically relevant material obtained during clinical placement.

**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

**Prerequisites** Paramedic Science 1

**Co-requisites**

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

- Cardiology:
  - Identify risk factors and prevention strategies associated with cardiovascular disease
  - Discuss electro physiology as it relates to the normal electrical and mechanical events in the cardiac cycle.
  - Outline the activity of each component of the electrical conductivity of the heart
  - Describe the pathophysiology, signs and symptoms and key assessment findings to distinguish selected cardiovascular disorders, including acute coronary syndromes
  - Describe the pre-hospital management of patients with selected cardiovascular disorders, including acute coronary syndromes
  - Identify appropriate actions to take in the pre-hospital setting to terminate resuscitation
  - Explain the relationship of the electrocardiogram tracing to the electrical activity of the heart

- Pulmonary emergencies:
  - Distinguish the pathophysiology of respiratory emergencies related to ventilation, diffusion and perfusion.
  - Describe the causes, complications, signs and symptoms, and pre-hospital management of patients diagnosed with; obstructive airways disease, pneumonia, adult respiratory distress syndrome, pulmonary thrombus embolism, upper respiratory infection, spontaneous pneumothorax, hyperventilation syndrome and lung cancer

- Neurological emergencies:
  - Outline pathophysiological changes in the nervous system that may alter cerebral blood flow, cerebral perfusion pressure and intracranial pressure.
  - Describe the assessment of a patient with a nervous system disorder
  - Describe the pathophysiology, signs and symptoms, as specific management techniques as each of the following neurological disorders; coma, stroke and intracranial haemorrhage, seizure disorders, headaches, brain neo plasm and brain abscess and degenerative neurological diseases

- Endocrine emergences:
  - Discuss the pathophysiological bases for key signs and symptoms, patient assessment, and patient management for; diabetes and diabetic emergences of, hypoglycaemia, diabetic ketoacidosis, and hyper-osmolar hyperglycaemic nonketotic coma
  - Discuss the pathophysiological bases for key signs and symptoms, patient assessment and patient management for disorders of the thyroid gland.
  - Discuss the Pathophysiological bases for key signs and symptoms, patient assessment and patient management for disorders of Addison disease

**Content** This subject will cover the following topics:
Cardiology and acute coronary syndromes
Pulmonary emergencies
Neurological emergencies
Endocrine emergencies

Required Reading

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

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

- Describe the pathophysiology, signs and symptoms, and pre-hospital management of the patient with urinary retention, urinary tract infections, pyelonephritis and urinary calculus
- Distinguish between acute and chronic renal failure
- Discuss general pre-hospital management for the patient with a urinary disorder
- Haematological disorders
- Discuss the pathophysiology and signs and symptoms of haematological disorders including; anaemia, haemophilia, Hodgkin’s disease, Lymphoma, Polycythaemia, sickle cell disease
- Outline general assessment of patients with haematological disorders
- Gynaecological disorders
- 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
- Discuss the pathophysiology of selected traumatic causes of abdominal pain in females; vaginal bleeding and sexual assault
- Outline the pre-hospital assessment and management of the female with abdominal pain
- Outline specific management and treatment of the patient who has been sexually assaulted
- Describe specific pre-hospital measures to preserve evidence in sexual assault cases

Obstetrics:
- Describe the organisation and function of the specialised structures of pregnancy
- Outline foetal development from ovulation to birth
- Explain normal maternal physiological changes that occur during pregnancy and how the influence pre-hospital patient care and transportation
- Describe appropriate information to be elicited during the obstetrical patient’s history
- Describe specific techniques for assessment of the pregnant patient
- Describe the assessment and management of the pregnant patient in the pre-hospital setting
- 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
- Outline the physiological changes that occur during labour

Geriatrics:
- Explain the physiology of the aging process as it relates to major body systems and hemostasis
- Describe general principals specific to older adults
- Describe the pathophysiology, assessment and management of specific illnesses in geriatric patients

- Discuss pre-hospital assessment and management of depression and suicide in the older adult.
- Discuss effects of drug toxicity in the older adult
- Describe the epidemiology, assessment and management of trauma, environmental emergencies and abuse in the geriatric patients
- Paediatrics
- Describe general principals specific to paediatrics
- Describe the pathophysiology, assessment and management of specific illnesses in paediatric patients
- Describe the pathophysiology, assessment and management of traumatic injuries and shock in paediatric patients
- Discuss and describe the psychosocial and pathophysiological aspects of non-accidental trauma
- Discuss and describe the psychosocial and pathophysiological aspects of SIDS

Content
This subject will cover the following topics:
- Urology and Urinary disorders
- Haematological disorders
- Gynaecology and genealogical disorders
- Obstetrics
- Geriatrics
- Paediatrics

Required Reading

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 two (2) 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 cased based problem solving exercises.

HFB2220 PARAMEDIC CLINICAL PRACTICE 4
Campus St Albans

Learning Outcomes
Upon the successful completion of this subject the student will:

- Describe and demonstrate the appropriate pre-hospital assessment and management of patients presenting with selected cardiovascular disorders, including the acute coronary syndromes
- Demonstrate the correct application and usage of a variety of cardiac monitoring devices.
- Demonstrate the systematic analysis of a three lead ECG rhythm strip.
- Describe and demonstrate the appropriate pre-hospital assessment and management of patients presenting various respiratory disorders.
- Describe and demonstrate the appropriate pre-hospital assessment and management of patients with both acute and chronic neurological disorders
- Describe and demonstrate the appropriate pre-hospital assessment and management of patients with an endocrine emergency
- Describe, demonstrate and justify the administration of various pharmacological agents related to the management of cardiovascular, respiratory, neurological and endocrine disorders
- Describe and demonstrate the appropriate pre-hospital assessment and management of female patients with reproductive emergencies.
- Demonstrate, in a simulated environment, the successful delivery of a child, in a variety of presentations.
- Describe and demonstrate management of the neonate, including the correct application of the APGAR score post delivery.
- Describe and demonstrate the appropriate pre-hospital assessment and management of paediatric emergencies.
- Demonstrate the assessment and management of the pre and postpartum patient in both the emergency and non-emergency state


- Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management.

**Content**

This subject will contain:

- Cardiovascular emergencies, including the acute coronary syndromes
- Respiratory emergencies
- Neurological emergencies
- Endocrine emergencies
- Female reproductive system emergencies
- Practical childbirth
- Care of the neonate and paediatric
- Management of the pre and postpartum patient

**Required Reading**

- Ambulance Service Victoria, Melbourne.

**Recommended Reading**


**Class Contact**

Eighty eight (88) 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 (40) 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.

**HFB3111 PROFESSIONAL BASIS OF PARAMEDIC PRACTICE 1**

**Campus**

St Albans, Off Campus, Online

**Presupposition(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:

- Cardiology:
  - Correlate pathophysiological concepts and assessment findings when patients experience acute health emergencies relating to alterations in perfusion and oxygenation.
  - Select and use diagnostic tests that aim to support or validate hypotheses regarding the health emergency.
  - Outline the appropriate assessment of a patient who may be experiencing a cardiovascular disorder.

- Describe ECG monitoring techniques that permit electrocardiogram interpretation.

- Describe the sequence of steps in electrocardiogram interpretation.

- When shown an electrocardiogram tracing, identify the rhythm, site of origin, possible causes, clinical significance, and pre-hospital management.

- Identify dysrhythmias of the/originating in the sinus node, atria, atrioventricular junction, atrioventricular blocks, ventricular, bundle branch and fascicular blocks.

- Describe the pre-hospital assessment and management of patients with selected cardiovascular disorders based on knowledge of the pathophysiology of the illness.

- 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 assay.

- Describe the method for taking 12-lead electrocardiogram tracings.

- Analyse and interpret 12-lead electrocardiograms.

- Integrate 12-lead electrocardiogram analysis and interpretation to determine appropriate pre-hospital assessment and management of the patient with a suspected acute myocardial infarction.

- List indications, contraindications, dose, precautions, adverse effects, mechanism of action of pharmacological agents used to manage cardiovascular disorders.

- Identify appropriate actions to take in the pre-hospital setting to terminate resuscitation.

**Airway Management and Ventilation:**

- Discuss the assessment and management of medical or traumatic obstruction of the airway.

- 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.

- 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.

- Demonstrate the correct and appropriate use of advanced ventilation-perfusion diagnostic technology including pulse oximetry, end-tidal carbon monoxide detection, and peak flow testing.

- Describe and demonstrate knowledge and skills for the administration of pharmacological agents of sedation and paralysis.

**Allergies and Anaphylaxis:**

- Describe the antigen anti body response

- Differentiate between an allergic reaction and a normal immune response.

- Describe signs and symptoms and management of local allergic reactions based on an understanding of the pathophysiology associated with this condition.

- Identify allergens associated with anaphylaxis

- Describe the pathophysiology, signs and symptoms, and management of anaphylaxis.

**Content**

This subject will cover the following topics:

- Cardiology
- Advanced airway management
- Allergies and anaphylaxis

**Required 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 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

172
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:

- Describe the clinical indications for, adverse effects of adrenergic and cholinergic agonists and antagonists.
- Describe the distribution and function of selected drug group receptors.
- Discuss the indications, uses, mechanism of action, contraindications and adverse effects of narcotic analgesics and non-narcotic analgesics.
- Discuss the indications, uses, mechanism of action. contraindications and adverse effects of selected cardiovascular drugs.
- Discuss the indications, uses, mechanism of action. contraindications and adverse effects of selected local anaesthetic drugs.
- Understand the role of prostaglandins in the inflammatory response.
- Contrast the actions of depolarising and non-depolarising neuromuscular blocking agents.
- State the rationale for the use of neuromuscular blocking agents in anaesthesia.
- Identify suitable agents for rapid sequence induction.
- Describe the actions of selected drugs used to treat heart failure.
- Discuss the indications, uses, mechanism of action. contraindications and adverse effects of anti-convulsant agents.
- Discuss the indications, uses, mechanism of action. contraindications and adverse effects of selected anti-emetic agents.
- 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:

- Adrenergic and cholinergic pharmacology
- Histamine and antihistamine agents
- Antipsychotic drugs
- Anxiolytics, hypnotics, and antidepressant drugs
- Anti-convulsants, and muscle relaxants
- Narcotic analgesics and antagonists
- Antiinflammatory, antipyretic, and analgesic drugs
- Local anaesthesia
- Antiarrhythmic and anginal drugs
- Antihypertensive drugs
- Anticoagulant, fibrinolytic and anti-platelet agents
- Diuretic agents
- Bronchodilators and respiratory agents
- 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 (1) hour mid semester theory examination 30%, a two thousand (2000) word assignment 30% and a three hour end of semester theory examination 40%. Successful completion of this subject requires all assessed 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.

**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:

- Describe the biopsychosocial model of health.
- Explain the concept of social capital and how it relates to the biopsychosocial model of health.
- Describe the mental health profile of people working in the ambulance industry.
- Compare the mental health profile of people working in the ambulance industry with that of the general Australian population.
- Explain the effects of shiftwork on sleep.
- Integrate concepts and techniques drawn from cognitive-behavioural psychology to improve sleep.
- Identify the mental health disorders of concern to the ambulance industry (including depression, anxiety and substance misuse).
- Integrate knowledge of the biopsychosocial model of health with ways of describing and dealing with mental health issues.
- Discuss concerns about suicide.
- 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)


**Class Contact** Four hours per week.

**Assessment** One Individual 500 word assignment (10%). P2, I3, O2, W2, A2. Two 500 word group assignments (2 x 10%). C3, P2, I3, O2, W2, A2.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


HFB3125 RESEARCH IN PARAMEDIC PRACTICE
Campus St Albans, Internet
Prerequisites Paramedic Science 2
Learning Outcomes
- Understand basic research methodology and terminology;
- Describe the main differences between qualitative and quantitative research;
- Discuss the advantages and disadvantages of the different methodologies;
- 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;
- Retrieve appropriate articles for a literature review;
- Conduct an in-depth critical appraisal of research articles;
- 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.


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 This subject has three (3) pieces of graded assessment:
- Before attempting the assessment, students must be able to perform a satisfactory grade in each component of the assessment.

HFB3226 MAJOR INCIDENTS
Campus St Albans, Internet
Prerequisites Advanced Paramedic Practice 1
Learning Outcomes On successful completion of this unit, the student will:
- Define a major incident
- Describe traditional disaster threats including natural phenomena such as floods, cyclones, earth quakes, tsunamis, fires, land slides, volcanic eruptions, and drought
- Describe new disaster threats including, wars, social violence, terrorism, civil unrest, epidemics and chemical and nuclear accidents or warfare.
- Discuss the principals of risk assessment and major incident planning, preparation, and coordination.
- Discuss the main elements of the national Major Incident and disaster Policy
- Describe the emergency services response to a major incident including police, fire, ambulance, health, state emergency service and other support agencies.
- Discuss the importance of a multi disciplinary response to a major incident.
- Discuss medical service major incident planning, preparation, response and recovery.
- Discuss and demonstrate principals of good communication at major incident
- Identify and describe reasons for poor communication at major incidents
- Demonstrate effective communications during a major incident simulation
- Discuss the role of the media at a major incident
- Discuss the principles of major incident management including principals of command and control and the Incident Command System (ICS).
- Discuss major incident management and treatment
- Define triage
- Describe and discuss the evolution of modern triage principals, the aims of triage and triage priorities
- Demonstrate correct application of triage and treatment principals during a major incident simulation
- Describe the organisation and types of transportation used at a major incident
- 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:
- The history of major incidents
- Principals of major incident planning, preparation, response and recovery
- The role and responsibilities of emergency services in the event of a major incident
- The roles and responsibilities of Ambulance and medical services in the event of a major incident
- Communications
- Major incident medical management-command and Control, The Incident Command System
- Major incident management, treatment, transport
- Sociological and psychological impacts of major incidents


Website webcct.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%.
developed and supplied by the Paramedic Science Unit, School of Health Science.


**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 worth 40% of the total mark, a one (1) hour written examination worth 20% of the total mark. Graded practical assessment of triage and radio communications 20% and a choice of one (1) one thousand (1000) word report on the emergency management plans in the student’s local area. 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:

- Apply the skills and knowledge of evidenced based health care acquired in this subject to evaluate their work as a paramedic.
- Critically examine current protocol systems and how they inhibit, support and or constrain the clinical decision making process
- Apply knowledge, skills and values, which will enable them to reflect their opinion and practice of pre-hospital care.
- Understand the decision making process as it applies to diagnostic reasoning in pre-hospital care.

**Content** This unit will cover:

- Principals of evidence based practice
- Hierarchies of evidence
- Assessing the methodological quality of evidence
- Clinical decision making
- Models of reasoning
- Logical fallacies
- Critical incidents associated with the decision making process
- Implementing evidence based findings
- Evaluating the relevance of care plans to pre-hospital care.
- The process of documentation associated with clinical decision making in pre-hospital care.
- Critique of current protocol systems within the context of the clinical decision making process.


**Assessment** This unit has two (2) assessment items, two (3) three thousand word (3000) assignments each worth 50% of the total mark. These assignments will include reports on the current statis of evidenced based concepts with in the discipline of pre-hospital care, research and literature reviews that aim to identify an evidence base 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:

- Describe the health challenges and long-term outcomes of patients with selected medical and trauma conditions.
- Discuss the efficacy of pre-hospital intervention in relation to immediate and long-term patient functional outcome.
- Discuss in-hospital management of patients with selected medical and trauma conditions.
- Critically analyse current pre-hospital care treatment regimes.
- Describe clinical tests used in diagnosis and assessment of patients with selected medical and trauma conditions.
- Demonstrate the appropriate and correct use of pre-hospital clinical skills in simulation exercises.
- 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:

- 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
  - Burns and electrical injuries
  - Chest and abdominal trauma
- The role of diagnostic testing: x-ray, computed tomography (CT scan), magnetic resonance imaging (MRI), ultrasound, angiography, biochemistry, haematology and microbiology/pathology
- In–hospital interventions and management of patients with selected medical and trauma conditions.
- Prognosis and long-term outcome of patients with selected medical and trauma conditions.


**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 2 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.

**HFB3229 PARAMEDIC PRACTICUM**

**Campus** St Albans, Internet

**Prerequisites** Advanced Paramedic Practice 1

**Learning Outcomes** Upon the successful completion of this subject the student will:

- Describe and demonstrate the appropriate pre-hospital assessment and management of patients presenting with selected wound types immediate and long-term functional outcome.
- Demonstrate the correct application and usage of a variety of wound management techniques including, suturing, wound debridement, eschiontomy, fasciotomy and lancing.
- Describe and demonstrate the correct application of a variety of physiotherapeutic techniques including, strapping, extended sprain and strain care, therapeutic massage, therapeutic ultrasound, and dislocation reduction.
- Demonstrate, through active participation in a variety of clinical settings, an understanding of the integration of health care practices in order to provide extended patient care for the sick and injured patient.
- Use reflective strategies to identify opportunities for improvement in clinical reasoning, patient management.

**Content** This subject will contain:
• Advanced wound care:
• Physiotherapeutic management:
• Integration of health practices and extended patient care:
• Synergy in Paramedicine


Class Contact Eighty eight hours (88) over one 12-week semester comprising of two (2) hours per week practical class and self-directed learning utilising the Paramedic Interactive Curriculum, and sixty four (64) 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.

HFB3301 ISSUES IN PREHOSPITAL HEALTH SERVICE DELIVERY

Campus St Albans, Off Campus, Online Pre requisite(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 Pre requisite(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 Pre requisite(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 Pre requisite(s) Successful completion of Years One and Two; or equivalents.

Content This subject will introduce 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 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%.

HFB3800 PARAMEDIC PROFESSIONAL WRITING (ELECTIVE)

(Offered in 2005 subject to demand)
Campus St Albans, Off Campus, Online Pre requisite(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

HFB3900 EMERGENCY MEDICAL SERVICES MANAGEMENT (ELECTIVE)
Campus St Albans, Off Campus, Online Pre requisite(s) Successful completion of Years One and Two; or equivalents.
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 and motions of the musculoskeletal system of the upper body;
2. Describe the bones, muscles, joints, vessels and nerves of the upper limb, spine, back, thorax, abdominal wall, and external head and neck;
3. Identify the key anatomical structures and spaces of the upper limb, spine, back, thorax, abdomen, and pelvis on models and cadaveric specimens;
4. Describe and define the somatic and autonomic nervous systems, and anatomical spaces of the upper 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 upper limb, thorax, abdomen, inguinal region and pelvis;
6. Briefly comment on the clinical relevance of the key anatomical features of the upper body;

Required Reading

Recommended Reading

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 histology 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. Explain the relationships amongst structure, function and dysfunction pertinent to regions of the head, neck and thorax;
5. Relate the relevant anatomical structures within the head, neck and thorax to osteopathic principles.

Content
Visceral anatomy of the head, neck and thorax, including the histology of visceral tissues. Embryological development of the major systems, including the neuromusculoskeletal system.

Required Reading

Recommended Reading

Class Contact
Four (4) 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 practical written examination (50%); one 3-hour final written examination (50%).

HHA2274 ANATOMY 4
Campus St Albans, City Flinders, Off Campus
Prerequisites HHA2173 Anatomy 3; or equivalent those structures to lay and professional audiences.

Learning Outcomes
On successful completion of this unit, it is expected that students will be able to:
- Identify, name and describe anatomical structures within the abdomen and pelvis, including the fascia and nervous, vascular and lymphatic systems, from regional perspectives;
- Describe the developmental processes and histology of all the major systems in the human body, including the gastrointestinal, reproductive, urogenital systems;
- 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;
- Explain the relationships amongst structure, function and dysfunction pertinent to regions of the abdomen and pelvis;
- 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 organs. Embryological development of the major systems, including the neuromusculoskeletal system.

Required Reading

Recommended Reading

Class Contact
Four (4) 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 written presentation proposal (hurdle requirement); one oral presentation (15%); one written assignment (1000 words) (15%); one practical and oral presentation of cadaveric prosection (20%); one 1-hour final written examination (50%).

HHA4174 ACUPUNCTURE AND MOXIBUSTION: CLINICAL INTERNSHIP 1
Campus VU/Gold Coast Institute of TAFE (GCIT)
Prerequisites As arranged and negotiated by GCIT and VUT.

Co-requisites
Learning Outcomes
On successful completion of this unit, students will be able to:
- Use advanced acupuncture and Chinese medicine therapy;
- Demonstrate professional skills, attitude and presentation as modelled by clinical educators;
- Monitor the consultation process;
- Give supervisors a CM diagnosis of the client they are treating;
- Locate and needle accurately acupuncture points appropriate to client needs;
- Use, and know when to use, moxa, cupping, Gua Sha, point injection therapy, dermal hammer, laser, electric stimulator and Chinese medicine;
- Demonstrate skilful use of relevant diagnostic equipment;
- Maintain detailed record of case notes;
- Conduct examination procedures in a way to minimize patient distress, embarrassment and risk of injury;
- Explain clinical significances of both negative and positive findings in plain English;
- Assess the client’s needs for ongoing treatment;
- Communicate the course of treatment to the client in plain English;
- Liaise and work effectively with clinical educators;
- Mentor students in the clinic;
- 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. 

**Assessment** Overall satisfactory report(s) from clinical placement(s) (50%) (hurdle requirement Combined practical and oral examination (50%) (proficiency standard 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

**HHA4175 ACUPUNCTURE AND MOXIBUSTION: CLINICAL INTERNSHIP 2**

**Campus** VU/Gold Coast Institute of TAFE (GCIT)

**Prerequisites** As arranged and negotiated by GCIT and VUT.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, students will be able to:

- Use advanced acupuncture and Chinese medicine theory;
- Demonstrate professional skills, attitude and presentation as modelled by clinical educators;
- Monitor the consultation process;
- Give supervisors a CM diagnosis of the client they are treating;
- Locate and needle accurately acupuncture points appropriate to client needs;
- Use, and know when to use, moxa, cupping, Gua Sha, point injection therapy, dermal hammer, laser, electric stimulator and Chinese medicine;
- Demonstrate skilful use of relevant diagnostic equipment;
- Maintain detailed record of case notes.
- Conduct examination procedures in a way to minimize patient distress, embarrassment and risk of injury;
- Explain clinical significances of both negative and positive findings in plain English;
- Assess the client’s needs for ongoing treatment;
- Communicate the course of treatment to the client in plain English;
- Liaise and work effectively with clinical educators;
- Mentor students in the clinic;
- 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. 

**Assessment** Overall satisfactory report(s) from clinical placement(s) (50%) (hurdle requirement Combined practical and oral examination (50%) (proficiency standard 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** Nil.

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

- Define and use correctly basic biomechanical terminology and principles;
- Discuss basic biomechanical principles in relation to osteopathic practice;
- Describe using general concepts, the structure and function of the components of joints;
- Explain the functions of the various joints and tissues in the human body;
- Comment on laboratory analysis techniques in kinetics, kinematics and gait.


**Class Contact** Three (3) 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); five (5) laboratory reports (10% each, total 50%); one 1-hour final written examination (50%).

**HHC2272 BIOMECHANICS 2**

Campus City Flinders

Prerequisite(s) HHA2173 Anatomy 3; HHC2171 Biomechanics 1; or equivalent.

Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

- Discuss in detail the biomechanics of major joints;
- Describe joint injury mechanics peculiar to each joint;
- Predict common causes of injury to each joint;
- Demonstrate laboratory analysis techniques in a biomechanics laboratory;
- Critically assess published research papers on mechanics of the body and its joints.

Content

Biomechanical analysis of specific joints in the human thorax and spine, hip, shoulder, knee and ankle. Analysis of joint components, muscles and passive structures peculiar to each joint, and an overview of injury-related issues peculiar to each joint. Students will research one specific topic area.

Required Reading


Class Contact

Three (3) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory practicals.

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

Prerequisite(s) HHC2272 Biomechanics 2; or equivalent.

Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

- Apply biomechanical principles and knowledge of anatomy to common activities;
- Apply biomechanical principles to the analysis of daily and other specified activities;
- Apply appropriate laboratory-based methods to analyse those activities;
- 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


Recommended Reading


Class Contact

Three (3) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory classes.

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

Prerequisite(s) HHC3173 Biomechanics 3; or equivalent

Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

- Integrate different knowledge aspects of biomechanics;
- Replicate a research study in biomechanics, applying knowledge and skills acquired in earlier semesters;
- Present orally individual or group research to colleagues and to lay people in ways that each group can understand;
- 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 student. American Psychological Association. (2001). Publication manual of the American Psychological Association (5th ed.). Washington, DC: Author.

OR


Recommended Reading


Class Contact

Three (3) hours per week or equivalent for one semester comprising 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); one oral research presentation (40%), one written research report (60%).

**HHD1271 CLINICAL DIAGNOSIS & MANAGEMENT 1**

Campus St Albans, City Flinders, Off Campus

Prerequisite(s) HHO1171 Osteopathic Science 1; HHA1171 Anatomy 1; HHP1171 Physiology 1; or equivalents.

Student Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

- Correctly and accurately use the vocabulary of the clinical examination;
- Explain the fundamentals of history taking as well as the common problems encountered during the recording of the history;
- Name the basic skin lesions and explain at a basic level their aetiology;
- Conduct a competent examination of the following structures: head, eyes, ears, nose, mouth, neck, nervous system, including the cranial nerves and reflexes, muscles and joints, thorax including lungs, heart and great vessels, peripheral vascular system, and abdomen;
- Describe the basic abnormal signs and symptoms that may be encountered when the named structures and systems are affected by pathology;
- Integrate and apply knowledge of anatomy and physiology (including from other units) to the living body;
- Explain the purpose and demonstrate at least limited use of the basic tools of clinical medicine, such as the stethoscope, otoscope, ophthalmoscope, reflex hammer, tuning fork and sphygmomanometer.

Content

Content will include an introduction to basic history taking; examination and assessment of: mental status, skin, head and neck, eye and ear, respiratory system, heart, peripheral vascular system, 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.

Required Reading


Recommended Reading


Class Contact Hours Two (2) 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); mock viva voce practical examination (pass/fail formalised assessment) (hurdle requirement); final viva voce practical examination (100%) (hurdle requirement).

HHD2172 CLINICAL DIAGNOSIS & MANAGEMENT 2
Campus Alberns, City Flinders, Off Campus.
Prerequisites HHD1172 Clinical Diagnosis & Management 1; HHY1271 Pathology 1; or equivalents.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
- Describe common and serious clinical scenarios in the haematological, cardiovascular, renal and urogenital systems;
- Demonstrate appropriate examination skills relevant to the cardiovascular, renal and urogenital systems;
- 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;
- Discuss models of clinical judgment used by a practising General Practitioner in relation to their own clinical experience;
- 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 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 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 1500 words) 35% Written Examination (2.5 hours duration)

HHD2214 HEALTH RESEARCH STUDY PERSPECTIVES
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. Knowledge of microbiology will enable the student to 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 embryological systems, structure and function, pathology, immunology, cellular damage, 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 repair, integumentary system biology, embryology and biochemistry, inflammatory response and associated damage, infection, immunity and allergy and neoplasia.


Class Contact 4 hours per week or equivalent

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)
Diseases affecting the respiratory, gastrointestinal and endocrine systems will be discussed. The unit features common clinical scenarios and 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.

**Required Reading**

- Recommended Reading

**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%).

**FACULTY OF HEALTH, ENGINEERING AND SCIENCE**

**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 their application of their skills obtained at the diploma level. Students will be exposed to a wide range of clients and procedures so that they feel more confident in dealing with future clients.
- 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.

**HHD2304 COOPERATIVE PLACEMENT**

- Campus: City King, City Flinders, Queen St
- Prerequisites: Industry Placements 1 and 2, or equivalents.
- Learning Outcomes: Students will acquire a greater understanding of the limitations 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. 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. Students will be able to identify the benefits of developing networks and professional contacts within the industry.

**Recommended Reading**

- None

**Class Contact**

- 12 hours per week or equivalent

**Assessment**

- Hurdle requirement – students are required to undertake workplace-based activities to the equivalent of 450 hours. 70% 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 core graduate attributes and identify areas for further development) 30% 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).

**HHD2723 CLINICAL DIAGNOSIS & MANAGEMENT 3**

- Campus: St Albans, City Flinders, Off Campus
- Prerequisites: HHD2172 Clinical Diagnosis & Management 2; or equivalent
- Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
  - Describe common and serious clinical scenarios in the respiratory, gastrointestinal and endocrine systems;
  - Demonstrate appropriate examination skills relevant to the respiratory, gastrointestinal and endocrine systems;
  - Recognise symptoms or signs that warrant referral to another practitioner including those that require immediate referral;
  - Describe and use the communication skills involved in the consultative process;
  - Discuss models of clinical judgment used by a practising General Practitioner in relation to their own clinical experience;
  - 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.

**Required Reading**


**Class Contact**

- Four (4) hours per week or equivalent for one semester comprising lectures, tutorials and laboratory sessions.

**Assessment**

- Hurdle requirement – students are required to undertake workplace-based activities to the equivalent of 450 hours. 70% 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 core graduate attributes and identify areas for further development) 30% 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).

**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.

**Required Reading**


**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-submitted 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.

**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.

Required Reading

Recommended Reading

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/ examinations (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, asesse, 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 gowns, latex allergy, proper documentation and a review of common procedures in cosmetic surgery.

Required Reading

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 only once. 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) HHD3000 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.

Required Reading

Recommended Reading
HHD3104 GRADUATING SEMINAR
Campus City King, St Albans
Prerequisite(s) Students must have satisfactorily completed the first two semesters of study for a 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 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 dermal 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.
Subject Hours Three hours per week for one semester comprising two hours of lectures and one hour seminar.
Assessment Public presentation (50%); research article (2500 words) (40%); ethics examination 10%. To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (research article and examination) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any re-attempt and resubmission will be 50%.

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 investigated and recommended regimes established. Skills will be developed in the application of advanced massages and electrical equipment techniques appropriate to the needs of the clients/patient. In addition, this subject will introduce the concepts of treatment sequencing, planning and reappraisals with special emphasis on peri-operative services.
Subject Hours Three hours per week for one semester comprising lectures, tutorials and laboratory sessions.
Assessment Micro-dermabrasion exam (50%); practical lymphatic exam (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.

HHD3114 WORKPLACE ISSUES IN DERMAL PRACTICE
Campus City King, City Flinders, Queen St
Prerequisites Nil
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 a greater understanding of a clients 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 themselves, 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 consider 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.
Learning Outcomes Students will feel greater confidence in the application of their skills obtained after completion of Industrial Practice 1. Students will be further exposed to a wide range of clients and procedures so that they feel more confident in dealing with future clients.
Content In this subject students will explore the workplace context by examining the organisational structure and identifying and defining their 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 or equivalent
Assessment Hurdle requirement – students are required to undertake workplace-based activities to the equivalent of 450 hours. 70% 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 core graduate attributes and identify areas for further development)30% 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).

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 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 repair, integumentary system biology, embryology and biochemistry, inflammatory response and associated damage, infection, immunity and allergy and neoplasia.

**Required Reading**

**Recommended Reading**

**Class Contact**4 hours per week or equivalent

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

**Prerequisites**
HHD2273 Clinical Diagnosis & Management 3; or equivalent.

**Learning Outcomes**
On successful completion of this unit, it is expected that students will be able to:
- Use at proficiency level the vocabulary of the musculoskeletal examination;
- Discuss the fundamentals of history as they pertain to musculoskeletal disease;
- Explain key diagnostic procedures, tests and investigations employed in rheumatology;
- Conduct competent examination of the following joints and their associated musculature and accessory structures such as bursae, menisci and ligaments: shoulder, elbow, wrist, hand, hip, knee, ankle and foot;
- Use a diagnostic algorithm to arrive at a differential diagnosis;
- Recognise the main classes of bone tumours and their specific clinical manifestations;
- Integrate knowledge previously presented in anatomy and physiology and apply this integrated knowledge to the living body;
- 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 used to diagnose pathology of the joints, bones and connective tissues 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.

**Required Reading**

**Recommended Reading**

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

**Assessment**
One practical examination (40%); one 2-hour written examination (60%).

**HHD3200 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. Students will be expected to work in a case management context under the supervision of a selected practitioner through a mentoring arrangement. Topics to include: further procedures in cosmetic surgery; complications of cosmetic procedures; using ultrasound and micro currents; diathermy, presootherapy for post liposuction; radiotherapy with cosmetic surgeries; galvano therapy and other therapies that can enhance surgical outcomes.

**Required Reading**

**Subject Hours**
A minimum of (48) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

**Assessment**
Successful completion of required 48 clinical hours (pass/fail) (hurdle requirement); presentation of case studies (60%); final examination (40%). 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%.

**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 dermatological applications.

**Required Reading**
AS/NZS 4173:2004 Guide to the safe use of lasers in health care Standards Australia

**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 confidence 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.

**Required Reading**
Content of the various types of ingredients used in skin care products. It is expected that students will be able to:

- Understand the chemistry and properties of different ingredients
- Evaluate the effectiveness of ingredients in various formulations

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 therapy and 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, light based treatment of hair, practical aspects of light based hair removal, light based treatment of vascular & pigmented lesions, and tattoo removal. This subject will also cover the importance of understanding the photobiology and safety of the skin.

Assessment:

Practical assessment (50%); assignment (2000 words)
40% Written Examination (2.5 hours duration)
20% Class presentation (A 10 minute presentation to the class on a set topic)

HHD3224 DERMATOLOGY

Campus King Street Campus, Queen St Campus, Flinders Lane Campus
Prerequisite(s) HHD3134 Dermal Science, or equivalent.

Learning Outcomes:

On successful completion of this unit the student will be able to:

- Understand the principles of dermatology
- 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
- 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 the 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 ingredients used in the manufacture of cosmetic 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 on the knowledge gained in Dermatology, New York: Churchill Livingstone. This subject will also cover the understanding of how peels and microdermabrasion techniques work and where appropriate how to perform them. Knowledge of chemistry, pharmacology and toxicology as it applies to chemical preparations used in dermal therapies will enable the student to use these preparations with greater confidence.

They will apply a range of techniques and treatment regimes to affect scar management and ageing skin management will also be presented.

Class Contact 3 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
Prerequisite(s) 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 applies to chemical preparations used in dermal therapies will enable the student to use these preparations with greater confidence.

They will apply a range of techniques and treatment regimes to affect scar management and ageing skin management will also be presented.

Class Contact 3 hours per week or equivalent

Assessment:

Practical Assessment 40%; Assignment (2000 words) 40% Written Examination (2.5 hours duration)

HHD3270 PROFESSIONAL ETHICS

Campus City Flinders
Prerequisite(s) HHO3175 Osteopathic Science 5; or equivalent.

Learning Outcomes:

On successful completion of this unit, it is expected that students will be able to:

- Discuss the legal framework in Australia in which osteopathy operates
- Evaluate the place of osteopathy within the Australian and other healthcare systems
- Debate the ethical requirements of practice in a multicultural society
- Evaluate various Boards’ and Associations’ codes of conduct
- Discuss the requirements for research and business ethics.
Content

Required Reading

Recommended Reading

Class Contact
One (1) hour per week or equivalent for one semester comprising lecture workshops.

Assessment
One 20-minute quiz (pass/fail formative assessment); one case analysis assignment (2000 words) (100%).


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 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-dermabrasion, 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.

HHD4104 DERMAL CLINICAL PRACTICE 1

Campus
City King, City Flinders, Queen St

Prerequisites
Health Science 3; Dermal Clinical Practice 1, or equivalents.

Learning Outcomes
The student will feel confident in the understanding of how infection control is important and is able to apply proper infection control methods related to medical procedures. The student will also have a greater understanding of what occurs during more common medical procedures.

Content
Students will develop sterile techniques including dressings, and setting up for minor cosmetic or aesthetic procedures. Topics include 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.

Required Reading

Recommended Reading

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)35% Assignment (Essay 2000 words)35% Written Examination (2.5 hours duration)

HHD4114 ADVANCED HEALTH RESEARCH PERSPECTIVES

Campus
City King, City Flinders, Queen St

Prerequisites
Health Research and Study Perspectives; or equivalent

Learning Outcomes
Students will have a fuller understanding of research methodology by examining different forms of research design. Students will be able to make decisions on the best format to collect and analyse data for a particular experiment. Students will have greater knowledge of the positives and negatives of using quantitative methods versus qualitative methods versus case studies.

Content
This subject extends the knowledge gained in Health Research and Study Perspectives and introduces new concepts in qualitative research and case reports. Various forms of qualitative methods will be considered, as well as the steps involved in managing, analyzing and reporting a case study. Comparisons between the different types of research (quantitative, qualitative and case studies) will also be considered to determine what best practices can be identified.

Required Reading

Recommended Reading

Class Contact
3 hours per week or equivalent

Assessment
60% Research design assignment (students are to collect background research and design an experiment 3000 words) 40% Article Critique (students are to critique two selected article 2000 words).

HHD4124 LYMPHATIC PROCEDURES

Campus
City King, City Flinders, Queen St

Prerequisites
Dermatology 3; Peels Procedures.

Learning Outcomes
The student will feel confident in the understanding of how certain techniques work and where appropriate how to perform them. Knowledge of the principles of manual lymph drainage and machine based lymph drainage will enable the student to perform these procedures with greater safety and confidence. By performing a range of lymph drainage and machine based treatments the student will be more effective in dealing with clients and achieving desired outcomes.

Content
This subject builds on 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 manual lymph drainage and machine based lymphatic drainage treatments.

Required Reading

Recommended Reading
None

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) 30% Written Examination (2.5 hours duration) 20%

187
Reading exercises (Composed on a series of short answer questions relating to selected journal articles).

**HHD4134 LASER AND LIGHT PROCEDURES**

**Campus** City, King, City Flinders, Queen St

**Prerequisites** Laser Safety and Light Based Treatments, Dermatology, or equivalents.

**Learning Outcomes** The student will feel confident in the understanding of how certain laser and light based techniques work and where appropriate how to perform them. Greater knowledge of laser physics will enable the student to perform laser treatments with a greater degree of safety and confidence. The student will gain experience in the use of class 3B and class 4 lasers and IPL for a variety of dermal treatments.

**Content** This subject builds on techniques covered in the Laser Safety and Light Based 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 assessed; these include: class 4 lasers and IPL. This unit will also cover the underpinning knowledge of laser physics required to safely and effectively perform and manage laser and IPL procedures.


**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).

**HHD4144 INDEPENDENT RESEARCH 1**

**Campus** City, King, City Flinders, Queen St

**Prerequisites** Research Perspectives 1, or equivalent.

**Learning Outcomes** Students will have gained greater experience in how to undertake a research project so that they are better prepared for future postgraduate study. Students will also have a much deeper understanding of their chosen topic.

**Content** Students will be guided through the processes of developing a research project with specific emphasis on appropriate research design, seeking ethics approval and development of proposals. Aspects of methodology such as subject selection, use of appropriate tools and record keeping will also be discussed.


**Class Contact** 3 hours per week or equivalent.

**Assessment** 50% Research Proposal (Students are to prepare a research proposal. 2000 words) 50% Ethics document (students are to prepare and submit an ethics document 1500 words).

**HHD4185 CLINICAL DIAGNOSIS AND MANAGEMENT 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:
- Explain the gross and developmental anatomy of the nervous system (module 1);
- Explain the functioning of the nervous system at gross and neural levels (module 1);
- Apply knowledge in clinical neurology to clinical cases commonly seen in osteopathic practice (module 1);
- Identify normal and pathological anatomy on diagnostic images ( module 2);
- Competently read radiographs, MRI, CT, ultrasound, bone scans, and other diagnostic images for the diagnosis of congenital anomalies and normal variants, traumatic injuries,sclerosis and infections (module 2);
- Recognise particular disease states from the identification of abnormalities of 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.


**Class Contact** 3 hours per week or equivalent.

**Assessment** One 1-hour examination (Clinical Neurology, 25%, hurdle requirement); one 15-minute practical slide examination (Diagnostic Imaging, 25%, hurdle requirement); one 1-hour written examination (Diagnostic Imaging, 25%, hurdle requirement); one 2-hour final written examination (Clinical Neurology, 25%, 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 also 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 and understanding of sterile gloving and gowing 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 peri-operative 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 gowing; managing fragile skin and record keeping.


**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).
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: 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 it 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 shortcomings 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 include carbohydrates, 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 dieting needs in respect of vitamins and minerals the effects of excessive amounts of vitamins and minerals.  
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) 60% 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 clinical setting. 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 interprofessional and professional communication skills.  
Required Reading Caring for Patients from Different Cultures by Geri-Ann Galanti (2004).  
Recommended Reading Rambo’s Nursing Skills for Clinical Practice (2005) Susan deWit Saunders.  
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 (Protocol handbook selected treatments covered in the course 3000 words)  

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 and present ideas gained from the course not only to colleagues but also to health professionals 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 concepts 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 dermal 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.  
Class Contact 3 hours per week or equivalent  
Assessment 30% Assignment (Problem solving exercises – set by the lecturer 2000 words) 30% Written Examination (2.5 hours duration) 40% Class Presentation (A 20 minute presentation to the class on a set topic).  

HHD4244 INDEPENDENT RESEARCH 2  
Campus City, King, City Flinders, Queen St  
Prerequisites Independent Research Project 1, or equivalent.  
Learning Outcomes Students will have gained greater experience in how to undertake a research project so that they are better prepared for future postgraduate study, specifically relating to data collection and report writing. Students will also have a much deeper understanding of their chosen topic.  
Content Students will be guided through the processes of developing a research project with specific emphasis on data collection, the use of appropriate statistical analyses and report writing.  
Recommended Reading None.  
Class Contact 3 hours per week or equivalent  
Assessment 100% – Research project report (Students will write a report as if it were to be submitted to a Journal. 5000 words).  

HHD4286 CLINICAL DIAGNOSIS AND MANAGEMENT 6  
Campus St Albans, City Flinders, Off Campus  
Prerequisites HHD4185 Clinical Diagnosis & Management 5; or equivalent.  
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:  
- Competently use the vocabulary of the neurological examination (module 1);  
- Explain the fundamentals of the clinical history as it pertains to neurological disease (module 1);  
- Explain the key diagnostic procedures, tests and investigations employed in neurology (module 1);  
- Competently use standard diagnostic equipment to conduct a rapid screening test of the nervous system (module 1);  
- Competently use standard diagnostic equipment to carry out the detailed examination of the key components of the nervous system (sensory, motor, cranial nerves, cerebral cortex, basal ganglia, cerebellum, upper and lower motor neurons, skeletal muscles, nerve damage in the upper and lower limb) (module 1);  
- Use a basic diagnostic algorithm to arrive at a differential diagnosis (module 1);  
- Predict basic abnormal signs and symptoms that may be encountered when named structures are affected by pathology (module 1);  
- Recognise the main classes of headache and their specific clinical manifestations (module 1);  
- Distinguish normal from pathological anatomy on diagnostic images (module 2);  
- Incorporate knowledge in anatomy and physiology when reading scans (module 2);  
- Competently read 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 (module 2);  
- Discuss the development, testing, approval and subsidy processes for drugs used and sold in Australia (module 3);  
- Explain the basic methods of drug action and of pharmacological concepts such as pharmacokinetics and dynamics (module 3);  
- Explain the main classes, and practical uses, of drugs relevant to osteopathic practice (module 3).
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 muscle, peripheral nerves, 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 neurological 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 arthritis, 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 other disease 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.

Required Reading

Recommended Reading

Electronic media

For information on most drugs as provided by MIMS, visit the CMPMedica, Australia Web site, http://www.mymdr.com.au.


Class Contact
Seventy-two (72) 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 examination (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 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.

Required Reading

Recommended Reading

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).

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 Endermo-therapy treatments. Discuss the health and hygiene requirements for performing injections. Discuss the hazards of performing advanced machine based Endermo-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 Endermo-therapy based treatments for scar revision and burns therapy.

HFF5185 COLD SOAP APPLICATIONS
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 functionality of cold soap 

Content
In this subject students will learn the functional applications of cold soap and how they can be used in a clinical setting. Knowledge to be developed in this unit includes the theory needed to perform cold soap applications. Also covered is the theory behind the assessment for and application of cold soap applications.
Required Reading

Recommended Reading

Class Contact 6 hours per week or equivalent
Assessment 50% Practical Assessments (Students are to perform procedures taught within the unit to derrmal 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
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 treatment 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.

Required Reading

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
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

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 derrmal 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:

• Distinguish amongst normal changes and typical and atypical pathological changes on diagnostic images (module 1);
• Determine when diagnostic images are clinically indicated (module 1);
• Interpret typical and atypical diagnostic images in a clinical setting (module 1);
• Integrate typical and atypical diagnostic images with other clinical information to guide clinical decision making (module 1);
• Describe the public and private health system costs associated with diagnostic images (module 1);
• 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);
• Interpret clinical tests and special investigations commonly used in the diagnosis of conditions typically seen in obstetrics, paediatrics and psychiatry (module 2);
• Explain the conventional medical management of paediatric, obstetric, ENT and psychiatric conditions typically presenting in osteopathic practice (module 2);
• Explain serious and common disorders in osteotics, paediatrics and psychiatry may impact on osteopathic practice (module 2);
• Discuss potential problems in osteopathy for the professional and the profession, and explore different ways of effectively responding to these problems (module 2);
• Evaluate the role of nutrients in health and disease (module 3);
• Recognize and respond appropriately to patients with nutritional deficiencies and eating disorders (module 3);
• Explain the impact of nutritional status in specific clinical conditions relevant to the practising osteopath (module 3);
• Relate the methods used for assessing food safety and the principles of food hygiene (module 3);
• Discuss the actions, interactions and adverse effects of the major drugs commonly seen in osteopathic practice (module 4);
• Explain referrals procedures and discuss ethical issues in cases where medications may becausing health problems (module 4);
• Discuss the actions, interactions and adverse effects of the drugs for the management of cardiovascular, gastrointestinal, respiratory, skin and psychiatric disorders (module 4).

Content
Module 1: Diagnostic Imaging 3 reviews pathologies by region using all imaging modalities; skull, cervical spine, thoracic spine, chest, lumbar spine; abdomen including foetal screening; pelvis and hip; upper and lower limb.

Module 2: Diagnostic Imaging 3 reviews pathologies by region using all imaging modalities; skull, cervical spine, thoracic spine, chest, lumbar spine; abdomen including foetal screening; pelvis and hip; upper and lower limb.

Module 4: Pharmacology 2 includes 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: adrenergic blockers, anticoagulants and lipid-lowering drugs. Other drugs with vascular effects: 5-HT agonists and sympatheticoimetics. Treatment of central nervous disorders like epilepsy and Parkinsonism. Treatment


MD: Lipincott Williams and Wilkins. 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 most drugs as provided by MIMS, visit the CMPMedica, Australia Web site, http://www.mydr.com.au

For information on medicine consumer medicine information and product information, visit the Royal Australasian College of General Practitioners (RACGP) Web site, http://www.racgp.org.au/library/medicines

Class Contact one hundred and twenty (120) hours or equivalent normally spread over one semester comprising lectures, tutorials, workshops and self-directed learning.

Assessment One 15-minute final oral examination (Diagnostic Imaging, 5%, hurdle requirement); one 1-hour final written examination (Diagnostic Imaging, 5%; hurdle requirement); four (4) group written cases (Diagnosis 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 (Diagnosis 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 Nil
Learning Outcomes On successful completion of this unit the student will be able to: Discuss the role of 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 using on patients or that patients may already be taking will be discussed 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 80% 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 Nil

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 effects 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.

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 therapies 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 Nil

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 medicolegal standard.

Content In this unit students will consider the psychological impact a severe trauma has on peoples cognition when that trauma greatly affects their appearances. 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 (Medico 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 Nil

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 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 their written case study, (the case being obtained from the teaching clinic). Students will continue to develop 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 deral therapist standards) 50% Assignment (Case study, 3000 words).

HHD5288 CLINICAL DIAGNOSIS AND MANAGEMENT 8

Campus St Alvans, 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:

- Elicit and interpret clinical signs and symptoms pertinent to conditions typically seen in gerontology, dermatology; and to more serious and specific disorders in gerontology, and musculoskeletal medicine (module 1);
- Interpret clinical tests and special investigations commonly used in the diagnosis of conditions typically seen in gerontology, dermatology and musculoskeletal medicine (module 1);
- Generate a primary diagnosis and a list of differential diagnoses consistent with typical presentations common in gerontology, dermatology and musculoskeletal medicine (module 1);
- Explain the medical management of various conditions typically presenting in osteopathic practice (module 1);
- Discuss how the serious and common disorders and the specialized areas of medical practice (gerontology, dermatology and musculoskeletal medicine) may impact on osteopathic practice (module 1);
- Apply knowledge, appropriate communications skills and critical reasoning skills consistent with professional osteopathic standards expected during patient consultations (module 1);
- Discuss potential professional problems and explore different ways of effectively responding to them (module 1);
- Function as practitioners within a multi-disciplinary healthcare team (module 1);
- Function as practitioners who can work independently within the scope of osteopathic practice (module 1);
- Evaluate the role of nutrients in health and disease (module 2);
- Explain the impact of nutritional status in specific clinical conditions relevant to the practising osteopath (module 2);
- State current recommendations for the nutritional management of some common and serious disease states (module 2);
- 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.

Module 1: Diagnosis and Management – PBL 2 discusses relevant issues and clinical presentations of conditions typically seen in gerontology and dermatology; 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, food 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. Student food diaries will provide opportunities for analysis and discussion.


Class Contact One hundred and eight (108) 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 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.


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 (40%); assignment (2000 words) (60%). 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%.

HHG5135 HEALING 1: COLOUR, SOUND AND MOVEMENT

Campus St Albans

Prerequisite(s) Nil

Content This subject will facilitate the exploration of the concept of health and healing through exposure to the creative processes involved in visual, aural and kinaesthetic techniques. Health and healing are seen in their broadest dimensions as the interconnectedness of the entire living system with the environment. The power of music, art and movement to influence a person and the interaction between environment is explored. The therapeutic effects of self expression to develop individual capacities to their full potential are examined through the use of colour, sound and movement. The focus of the subject is on the maintenance of wellness, rather than a focus on pathology and illness.

Required Reading To be advised by lecturer.

Subject Hours A minimum of forty-eight (48) hours for one semester comprising lectures, tutorials, seminars, and self-managed and experiential learning in the field.

Assessment Fieldwork presentation and journal, (40%); major assignment, (60%). 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 marks to be obtained on any resubmission will be 50%.

SCHOOL OF HEALTH SCIENCES

193
once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HHG5145 THEORETICAL FOUNDATIONS OF HEALING 2**

**Campus** St Albans  
**Prerequisite(s)** Nil  
**Content** The subject further develops students’ knowledge of approaches to health and healing. Individual, group and family counselling theories are examined from both an Oriental and Western perspective. Within the counselling environment cultural differences will be explored and appropriate techniques applied.  
**Assessment** A minimum of thirty-six (36) hours for one semester comprising lectures, tutorials seminars and self-managed learning  
**Submission** Personal reflective journal (30%); theory paper (40%); evidence of participation (skills demonstration, evidence of reading, class discussion) (30%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (theory paper) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HHG5245 HEALING 2: TACTILE THERAPIES**

**Campus** St Albans  
**Prerequisite(s)** HHG5135 Healing 1: Colour, Sound and Movement; or equivalent.  
**Content** This subject provides the opportunity to further develop the knowledge and skills gained in Healing 1. The central focus of this subject is the conceptual and skill development of touch as a healing therapy. The therapeutic use of touch is a powerful healing tool utilised in many cultures to enhance growth and development in the young, promote and maintain well being, and to heal and comfort the sick. Swedish massage and Shiatsu is studied from both an historical and contemporary perspective. The key principles of the therapeutic use of self, music, colour, scent and movement will be integrated into this subject.  
**Assessment** A minimum of forty-eight (48) hours for one semester comprising lectures, tutorials seminars, self-managed learning and fieldwork.  
**Assessment** Practical examination (40%); field experience and personal reflective journal (20%); written assignment (40%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment items (practical examination and written assignment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HHG5255 HEALING 3: APPROACHES TO HEALING SKILLS**

**Campus** St Albans  
**Prerequisite(s)** HHR0001 Introduction to Research Design and Methods; or equivalent.  
**Content** This subject builds on the key theoretical frameworks introduced in Theoretical Foundations of Healing Practice. Students are exposed to a broad range of techniques designed to teach individuals skills in maintaining well-being and equilibrium. The meaning of health and well being is explored in the context of the link between stress arousal and the disease process. A combination of approaches which influence healing skills are examined, for example the concept of stress as described by Cannon, Lazarus, Selye, Spiegal and Solomon. Various relaxation responses will be explored. The skills of autogenic training, progressive relaxation, deep muscle relaxation, visual imagery, biofeedback, self-awareness techniques and body breathing exercises are explored. The application of these skills is discussed in relation to a range of situations.  
**Required Reading** To be advised by lecturer.  
**Subject Hours** A minimum of forty-eight (48) hours for one semester comprising lectures, tutorials seminars, self-managed learning and fieldwork.  
**Assessment** Seminar presentation (20%); essay (40%); experiential workshop or fieldwork (40%). 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 resubmission will be 50%.

**HHG5265 RESEARCH PROJECT**

**Campus** St Albans  
**Prerequisite(s)** HHR0001 Introduction to Research Design and Methods or equivalent.  
**Content** This subject is the culminating unit and provides students with the opportunity to further develop and apply the knowledge and understanding acquired in previous subjects of the course. Students will use the proposal developed in HHR 0001 Introduction to Research Design and Methods and implement a literature-based project, which critically analyses an area of professional interest relevant to complementary medicine and healing therapies. The aims and objectives of this subject will be introduced to the students at the commencement of the course to allow for reflection and preparation for the continuation of the project.  
**Subject Hours** A minimum of thirty-six (36) hours for one semester comprising lectures, tutorials seminars and self-managed learning.  
**Assessment** Submission of completed project (5000 words) (100%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (completed project) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HHH4101 RESEARCH METHODS**

**Campus** St Albans  
**Prerequisite(s)** Nil  
**Content** Evaluation of the health care professionals role in the research process and the significance of research to health care. Discussion of the different trends and issues within health care research. Exploration of legal and ethical considerations in research. Examination of qualitative and quantitative research methods. Consideration of how research ideas/questions can be generated and which research methodology may be appropriate. Data analysis and interpretation.  
**Assessment** Seminar presentation with staff and peer assessment (50%); written assignment (50%). To obtain a Pass in the subject, a pass must be gained for each component of assessment. Failed assessment item (written assignment) may be re-attempted and resubmitted once only. Maximum possible marks to be obtained on any resubmission will be 50%.

**HHH4111 RESEARCH METHODS IN HEALTH SCIENCE**

**Campus** St Albans  
**Prerequisite(s)** HHR0001 Introduction to Research Design and Methods or equivalent.  
**Co-requisites** Nil  
**Learning Outcomes** On the completion of this subject, students will be able to:  
- understand in depth a range of health research methodologies;  
- formulate research questions and identify methodologies appropriate to exploring these;  
- apply commonly used health research methodologies;  
- critically evaluate health research papers;  
- identify ethical issues associated with conducting research;  
- demonstrate competence in the use of statistical analysis software.
Content: This subject focuses on qualitative and quantitative methods in health research with specific emphasis upon those methodologies that students are likely to employ in their research projects. The subject will also include research design: locating and evaluating research papers; identifying and managing ethical issues that pertain to research. Students will also learn how to enter and analyse data using SPSS software.

Required Reading: 
- Churchill Livingstone.
- Polgar, S., & Thomas, S. A. (2000). The health priorities. The subject assists students in detailing and emphasis upon situating research within national, state and regional work. On the completion of this subject, students will be able to:
  - enhance their skills in academic writing, information retrieval and referencing;
  - construct and submitted an ethics application based on their proposed research undertaking;
  - 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 workshop sessions 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: 

Recommended Reading: 


- Plagiarism Policy – Victoria University VicHealth website: www.vichealth.vic.gov.au
- Plagiarism Policy – Victoria University VicHealth website: www.vichealth.vic.gov.au
- Western Health:

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 workshop sessions 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.

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 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.

Recommended Reading: 

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’).

**HHI4241 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 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-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 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 the 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 Shijin’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 in order to allow students to undertake their final clinical internship in China.

**Assessment** One class 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 2-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 as demonstrated by Practitioner Clinicians, 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 dispensary. While the supervising practitioner has overall authority, the Internship practitioner must work closely with the supervising practitioner for all financial decisions and must report discipline issues. During the mentorship process, the Intern practitioner has the authority to ensure HPÜ policies and procedures are followed.


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

**Subject Hours** A minimum of one hundred and four (104) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

**Assessment** Combined practical and oral examination (hurdle requirement); placement (50%) comprising successful completion of required 104 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement). To obtain an Ungraded Pass in the subject, normally all components of assessment must be attempted and passed. Any failed assessment item 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. The clinical placement must be completed before the final year students will spend part of their time as supervisor in the dispensary. 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. Initial mentor: Final year students are to work closely with junior students to assist them develop clinical skills. Dispensary supervision: Final year students are to work closely with junior students to assist them develop clinical skills. Dispensary supervision: Final year students are to work closely with junior students to assist them develop clinical skills.

Assessment

Recommended Reading

Required Reading

HNK4002 CHINESE MEDICAL SPECIALTIES: ACUPUNCTURE

For continuing students only

Campus St Albans

Prerequisite(s) HNKT002 Acupuncture Therapeutic Applications; or equivalents.

Corequisite(s) HNKT002 Chinese Medical Specialties; or equivalent.

Content In these specialist areas of study, attention will be given to enhancing the student’s theoretical knowledge concerning diagnosis, CM aetiology, treatment principles and management strategies. Ways of selecting acupuncture points, needle techniques and manipulation, application of moxibustion techniques and the role of electro-acupuncture are considered.

Required Reading

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. The clinical placement must be completed before the final year students will spend part of their time as supervisor in the dispensary. 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. Initial mentor: Final year students are to work closely with junior students to assist them develop clinical skills. Dispensary supervision: Final year students are to work closely with junior students to assist them develop clinical skills. Dispensary supervision: Final year students are to work closely with junior students to assist them develop clinical skills.

Assessment

Recommended Reading

Required Reading

HNK4004 SCHOOLS OF THOUGHT IN ACUPUNCTURE

For continuing students only

Campus St Albans

Prerequisite(s) HNKT002 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 zhu, ling gui ba fa, yuan wu bi lei, the application of the ‘Ghost Points’ and Japanese ideas: dispersing xie Qi and supporting zheng Qi. The further applications of acupuncture in Wei and Bi syndrome; Zhong Feng; the diagnosis and treatment of specific musculo-skeletal conditions; the protocols and application of electro-acupuncture, point injection therapy, laser therapy, magnet therapy, Tui Na, cupping, moxibustion and Gua Sha as these apply to musculo-skeletal disorders; the treatment and management of sporting injuries.
HHK4010 CHINESE MEDICINE CLINICAL INTERNSHIP 1 – ACUPUNCTURE MAJOR
For continuing students only
Campus St Albans
Prerequisite(s) HHK3020 Chinese medicine clinical practice – Acupuncture major 4; HHT3001 Internal medicine; or equivalent.
Content During the first two weeks of semester the students will be required to attend a two hour seminar to detail the expectations in this subject, revisit ethical professional issues, and review clinical operating procedures. Students practice as interns under the supervision of approved clinical teachers. Students are required to spend time in at least five of the Victoria University clinical locations in Melbourne to gain broad clinical experience and be guided by a variety of clinical teachers. Skills required: Advanced acupuncture and prepared Chinese medicine theory, needling and Tui Na therapy, excellent interpersonal skills, and a professional attitude and presentation. Practical skills to be developed and assessed: monitoring the consultation process, ability to give supervisors a CM diagnosis of the client they are treating, ability to locate and needle accurately acupuncture points appropriate to the clients needs. Be able to use, and know when to use, moxa, cupping, Gua Sha, point injection therapy, dermal hammer, laser, electric stimulator and prepared Chinese medicine. Other skills include being able to assess the client's needs for ongoing treatment, and be able to communicate with the client their course of treatment, liaise and work effectively with clinical teachers and mentor students in the clinic.
Recommended Reading To be advised by lecturer.
Subject Hours A minimum of one hundred and four (104) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement). During the first week students will attend three 2-hour seminars in preparation for commencement of their internship. Liaise and work effectively with clinical teachers and mentor students in the clinic.
Assessment Combined practical and oral examination (hurdle requirement); placement comprising successful completion of required 104 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement). To obtain an Ungraded Pass in the subject, normally all components of assessment must be attempted and passed. Any failed assessment item will need to be discussed in the first instance with the Subject Co-ordinator.
HHK4020 CHINESE MEDICINE CLINICAL INTERNSHIP 2 – ACUPUNCTURE MAJOR
For continuing students only
Campus St Albans, Off Campus
Prerequisite(s) HHK4010 Chinese Medicine Clinical Internship 1 – Acupuncture Major; or equivalent.
Content During the first two weeks of semester the students will be required to attend a 2-hour seminar to detail the expectations in this subject, Revisit ethical professional issues, and Review clinical operating procedures. Students practise as interns under the supervision of approved clinical educators. Students are required to spend time in at least five of the Victoria University clinical locations in Melbourne to gain broad clinical experience and be guided by a variety of clinical educators. Skills required: Advanced acupuncture and prepared Chinese medicine theory, needling and Tui Na therapy, excellent interpersonal skills, and a professional attitude and presentation and be guided by clinical educators. Practical skills to be developed and assessed: monitoring the consultation process, ability to give supervisors a CM diagnosis of the client they are treating; ability to locate and needle accurately acupuncture points appropriate to the clients needs. Students will be able to use, and know when to use, moxa, cupping, Gua Sha, point injection therapy, dermal hammer, laser, electric stimulator and prepared Chinese medicine. Other skills include being able to assess the client's needs for ongoing treatment, to communicate with the client about their course of treatment, to liaise and work effectively with clinical educators and to mentor students in the clinic.
Recommended Reading To be advised by lecturer.
Subject Hours A minimum of two hundred and eight (208) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).
Assessment Final combined clinical practical and oral examination (hurdle requirement); placement comprising successful completion of required 208 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement). To obtain an Ungraded Pass in the subject, normally all components of assessment must be attempted and passed. Any failed assessment item will need to be discussed in the first instance with the Subject Co-ordinator.
HHL4181 RESEARCH 1
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:
• Evaluate different types of statistical designs;
• Explain research methods relevant to research in osteopathy and related health fields;
• Identify ethical requirements in the conduct of research;
• Critically appraise literature in the field of health science;
• Independently write a research proposal;
• Present a research proposal in an oral format to peer review.
Content Review of scientific methods; quantitative and qualitative research paradigms; data sampling and collection; questionnaire design; outcome measures used in manual therapy research; qualitative methods: case study, grounded theory, ethnography, focus group; ethical issues and evaluation of research papers; data analysis: descriptive and inferential statistics, correlations and hypothesis testing.
Class Contact Sixty (60) hours or equivalent normally spread over one semester comprising lectures, tutorials and workshops.
Assessment Selection of topic and supervisor form (hurdle requirement); written research proposal (3000-5000 words) (50%) (hurdle requirement); one oral PowerPoint presentation of proposal (20%); one 2-hour written examination (30%) (hurdle requirement).
HHL4282 RESEARCH 2
Campus St Albans, City Flinders, Off Campus
Prerequisite(s) HHL4181 Research 1; or equivalent.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
• Explain data analysis methods relevant to research in osteopathy and related health fields;
• Describe detailed methods of qualitative and quantitative statistical analysis;
• Use a statistical computer package for data analysis;
• Complete a written ethics application for a research proposal.
Content Extension and consolidation of data analysis methods. Quantitative data analysis: revision of descriptive and inferential statistics, correlations and hypothesis testing, general linear model, power and effect, analysis of variance and covariance, multivariate designs, nonparametric data analysis and selection of nonparametric tests, practical use of the SPSS statistical computer package. Qualitative data analysis: major qualitative methodologies, techniques in data collection and analysis.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

- Independently produce a scholarly piece of original writing (thesis of 12,000-20,000 words) relevant to the discipline of health science;
- 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.


Prerequisites HHL4282 Research 2; or equivalent.

HHL6800 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 be normally assessed by at least two expert examiners from an appropriate area of expertise.
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; the thesis in which the topic is introduced and formulated; the investigation of approved topic, followed by the submission of a suitably formatted essay. The project will include the general principles of: Oriental Medicine: Chinese and Japanese healing; Ayurveda and Yoga: Indian and Panric healing; Naturopathy: European natural therapy; Australian Aboriginal healing; Western healing: Shamanistic healing practices. The opportunity to explore the philosophies underlying healing and healing practices will be provided, to allow a broad foundation for the study of the sensory and cognitive healing approaches in the course.

**Required Reading**

**Recommended Reading**

**Subject Hours**
A minimum of thirty-six (36) hours for one semester comprising lectures, tutorials seminars and self-managed learning.

**Assessment**
Personal reflective journal (hurdle requirement); class participation/group work (20%); written assignment (2000 words) (80%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (written assignment) may be re-attempted and resubmitted only once. Maximum possible marks to be obtained on any resubmission will be 50%.

**HNN0014 DEVELOPING PHARMACOLOGICAL UNDERSTANDING IN NATURAL MEDICINE**

**Campus**
St Albans, Online

**Prerequisite(s)**
Nil

**Content**
Drug interactions and contraindications of use, understanding pharmacology and its interactions upon the endocrine system, the nervous system, and the circulatory system. Endocrinology of the function and pathology of the endocrine glands, hormones and the associated diseases and conditions.

**Required Reading**

**Recommended Reading**
Students will be informed of further reading material.

**Subject Hours**
A minimum of ninety-six (96) hours for one semester comprising lectures, tutorials, seminars and self-managed learning.

**Assessment**
Class presentation and participation (20%); written assignment(s) (80%). To obtain at least a Pass in the subject, normally all components of assessment must be attempted and passed. Failed assessment item (assignments) may be re-attempted and resubmitted only once. Maximum possible marks to be obtained on any resubmission will be 50%.
HHN0021 COUNSELLING SKILLS FOR NATURAL MEDICINE PRACTITIONERS
Campus St Albans, Off Campus
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, Alderian, Existential, Person Centred, Gestalt, Reality, Behavioral, Cognitive, Family systems, Ego State Therapies, as well as meditation, relaxation therapy. Ethical and legal issues of counselling.
Subject Hours The equivalence of 39 hours per semester delivered in burst mode over 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.

HHN0022 PROFESSIONAL WRITING IN NATURAL MEDICINE
Campus St Albans, Online
Prerequisite(s) Nil
Content Preparing a journal article based on the evaluation of professional literature in the field of Natural Medicine. Discuss and understand the process of writing a paper(s). Understand library research skills, professional writing and reading skills.
Assessment Assessment: One 5000-10000 word written research project based on the evaluation of professional literature in the field of Natural Medicine. In-depth Interviewing: Researching People. A pass must be achieved on any resubmission will be 50%.

HHN0023 RESEARCH PROJECT
Campus St Albans, Online
Prerequisite(s) Nil
Content Students will undertake a task based on professional experience and/or the professional literature and produce a research project. Students are expected to prepare a proposal. On acceptance of the proposal students are expected to develop this into a research project. Interaction between facilitator and students is essential.
Subject Hours A minimum of one hundred and thirty-two (132) hours for one semester comprising lectures, tutorials, seminars and self-managed learning.
Assessment: Class presentation of project (20%); minor research project assignment (5000 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%.

HHN1171 OSTEOPATHIC SCIENCE
Campus St Albans
Prerequisite(s) Nil
Co-requisite(s) HHA1171 Anatomy 1; HHP1171 Physiology 1; HHU1711 Clinical Practicum 1; RMS1711 Biochemistry (Osteopathy) 1; RBF1710 Cell Structure and Function; 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 Hours 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); paper critiques and one oral presentation (Palpation) (pass/fail) (hurdle requirement); three quizzes (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).

**HHO1272 OSTEOPATHIC SCIENCE 2**

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

**Prerequisites** Satisfactory completion of first semester of the HBOS degree; or equivalent.

**Co-requisites** HHA1272 Anatomy 2, HHD1271 Clinical Diagnosis & Management 1, HHU1272 Clinical Practicum 2, RMS1272 Biochemistry (Osteopathy) 2, or equivalents.

**Learning Outcomes**

- On successful completion of this unit, it is expected that students will be able to:
  - Discuss osteopathic principles at a level higher than basic;
  - Name, identify and palpate the major anatomical structures and landmarks;
  - Describe the major anatomical structures and landmarks, including in plain language;
  - Demonstrate soft tissue and articulatory techniques for prescribed areas of the musculoskeletal system: thorax, lumbar, pelvic and lower limb;
  - 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, pelvic 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.

**Required Reading**


**Recommended Reading**


**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 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:

- Demonstrate with commentary and perform HVLA thrust techniques to the spine safely whilst taking into consideration both patient and operator comfort;
- Explain the principles of regional peripheral examination;
- Demonstrate with commentary and perform examinations of the peripheral regions;
- Discuss presentations of common osteopathic conditions and their diagnosis;
- Explain the major contraindications to osteopathic treatment in relation to the various techniques taught;
- Discuss the requirements and considerations for patient and operator safety and comfort;
- 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.

**Required Reading**


**Recommended Reading**


**Class Contact**

Six (6) 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 20-minute practical examination (HVLA) (pass/fail) (hurdle requirement); one 15-minute practical examination (Peripheral Assessment (pass/fail) (hurdle requirement); one 3-hour written examination (Osteopathic Science Theory) (pass/fail) (hurdle requirement).

**HHO2274 OSTEOPATHIC SCIENCE 4**

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

**Prerequisites** HHO2173 Osteopathic Science 3; or equivalent.

**Learning Outcomes**

On successful completion of this unit, it is expected that students will be able to:

- Discuss osteopathic principles at a level higher than basic;
- Name, identify and palpate the major anatomical structures and landmarks;
- Describe the major anatomical structures and landmarks, including in plain language;
- Demonstrate soft tissue and articulatory techniques for prescribed areas of the musculoskeletal system: thorax, lumbar, pelvic and lower limb;
- Adapt osteopathic soft tissue and articulatory techniques to accommodate patients' needs and preferences.

**Content**

This unit comprises three modules: Module 1: Clinical Practice; Module 2: Physical Examination; 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.

**Required Reading**


**Recommended Reading**

• Explain current scientific concepts and theories relevant to the manual therapies in general;
• Discuss the extent of the evidence-based approach to medicine and the limitation currently available to the manual therapies;
• Evaluate scientific and magazine articles on osteopathic principles, philosophy, and practice.

Content This unit comprises four modules: Module 1: High Velocity Low Amplitude Thrust Technique; Module 2: Peripheral Joint Technique; Module 3: Osteopathic Science Theory; and Module 4: History and Practice.


HHO3175 OSTEOPATHIC SCIENCE 5

Campus St Albans, City Flinders, Off Campus.
Prerequisites HHO2274 Osteopathic Science 4; or equivalent

Co-requisites

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
• Discuss the skills and knowledge required to perform Muscle Energy Technique (MET);
• Discuss the therapeutic principles of MET;
• Explain the limitations of the MET paradigm in light of current evidence;
• Competently assess all regions of the musculoskeletal system for somatic dysfunction;
• Evaluate conditions commonly presenting in osteopathic practice for their suitability for MET;
• Competently and safely apply MET to any region of the musculoskeletal system;
• Explain the various models of osteopathic diagnosis, treatment and prognosis.


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:
• Competently assess all regions of the musculoskeletal system for somatic dysfunction;
• Explain the major contraindications to osteopathic treatment in relation to the various techniques taught;
• Competently apply MET to any region of the musculoskeletal system;
• Competently demonstrate with commentary and perform HVLA thrust techniques to the spine safely whilst taking into consideration both patient and operator comfort;
• Explain HVLA of transitional regions;
• 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.


**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); two 15-minute practical examinations (MET, and HVLA), (pass/fail) (hurdle requirements); one 3-hour final written examination (Osteopathic Science Theory), (pass/fail) (hurdle requirement).

**HHO4187 OSTEOPATHIC SCIENCE 7**

**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:

- Demonstrate an expanded range of technical manual therapy skills that includes counterstrain/positional release techniques;
- Discuss specific rehabilitation program principles for common upper and lower limb injuries;
- Explain the factors involved in the effective management of patients;
- Justify the importance of preventative care during rehabilitation.

**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 involving the ankle, calf, foot and knee. Acute and chronic injuries and principles of taping. Presentation of patient information. 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:

- Demonstrate a range of technical skills, including fascial and balanced ligamentous tension techniques;
- Discuss aspects of patient management, including those that may impact on the management of infants, children, the elderly and the infirm;
- Explain rehabilitation procedures for common conditions and surgical procedures affecting the spine, pelvis and thorax.

**Content** Indirect techniques. Functional, fascial and Balanced Ligamentous Tension (BLT) techniques. Rehabilitation. Assessment, treatment and rehabilitation of injuries to the spine, pelvis and thorax. Rehabilitation after common surgical procedures to the spine, pelvis and thorax. Management of acute and chronic injuries. Presentation of patient information: 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) (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:

- Demonstrate an expanded range of technical skills, including the ability to manage common visceral conditions amenable to osteopathic treatment;
- Demonstrate a broad range of technical skills, including the ability to manage common sports injuries affecting the limbs;
- 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, total 50%); 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:

- Demonstrate an expanded range of technical skills, including the ability to assess and treat cranio-sacral conditions amenable to osteopathic treatment;
- Demonstrate a broad range of technical skills, including the ability to manage common sports injuries affecting the spine and pelvis;
- 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.

SCHOOL OF HEALTH SCIENCES


**Class Contact** Eight-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 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:

- Discuss the principles and concepts of basic physiological methodology;
- Explain the major concepts involved in cellular physiology, the body's natural defences, blood cell development, establishment and alteration of the cell membrane potential, transmission of nervous impulses, and muscle physiology;
- Link theoretical physiology knowledge and laboratory skills;
- Apply scientific questioning to basic theoretical knowledge in physiology;
- Critically assess research papers and physiology research papers in particular;
- 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, blood and the body's natural defences, introduction to the nervous system, membrane and action potentials, transmission of nervous impulses, and muscle and skeletal 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 (2) 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** HHP1271 Physiology 1; or equivalent.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

- Discuss the key principles and concepts of human physiology in relation to cardiovascular and renal physiology;
- Explain the major concepts involved in cardiac, circulatory and renal physiology;
- Integrate theoretical cardiovascular and renal physiology knowledge with laboratory skills;
- Apply scientific questioning to basic theoretical knowledge of cardiovascular and renal physiology;
- Critically assess research papers and cardiovascular and renal physiology papers in particular;
- Produce 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.


**Class Contact** Three (3) hours per week or equivalent for one semester comprising lectures 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.

**Learning Outcomes**

- Discuss the key principles and concepts of human physiology in relation to respiratory and gastrointestinal physiology;
- Explain the major concepts involved in respiratory and gastrointestinal physiology;
- Integrate theoretical knowledge on respiratory and gastrointestinal physiology with case studies and the clinical case report. Material is specifically related to clinically relevant presentations in osteopathic practice.


**Class Contact** Three (3) hours per week or equivalent for one semester comprising lectures 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); one oral presentation of a case study (15%);
written assignment (1500 words) (15%); two 1-hour multiple choice question (MCQ) tests (10% each, total 20%); one 3-hour written examination (50%).

HHP3174 PHYSIOLOGY 4

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

**Prerequisites** HHP2273 Physiology 3; or equivalent.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
- Define the key principles and concepts of human physiology in relation to metabolism and endocrinology;
- Explain the major concepts involved in metabolism and endocrinology;
- Use theoretical knowledge on metabolism and endocrinology to explain clinical case presentations;
- Apply scientific questioning to basic theoretical knowledge of metabolism and endocrinology;
- Critically assess research and clinical report papers, and metabolism and endocrinology papers in particular;
- Produce clinical case reports and written critiques on topics in metabolism and endocrinology 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 metabolism and endocrine 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**

**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:
- Define the theoretical and practical concepts in exercise physiology and exercise prescription;
- Discuss the principles of exercise physiology and exercise prescription;
- Discuss the principles of prescribing exercise to special populations;
- Explain exercise prescription for specific patient groups;
- Discuss issues associated with acute sporting injuries;
- Develop and write exercise programs;
- 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**

**Recommended Reading**

**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%).

HHP5101 FUNDAMENTALS OF EMERGENCY MANAGEMENT

**Campus** Internet Australia

**Prerequisites** Appropriate Undergraduate qualification or equivalent

**Learning Outcomes** Upon successful completion of this subject the student will:
- Describe the historical aspects of natural and human made disasters;
- Define the terms: natural, human made, compensated, uncompensated, compound and simple disasters;
- Discuss the political, psychological and cultural context of disaster;
- Discuss the political and legislative frameworks related to emergency management at a state, federal and international level;
- Describe emergency management systems that have evolved to address the prevention, management and recovery from disasters;
- The political, psychosocial and cultural context of disaster;
- Describe pivotal events nationally and internationally that have impacted on the legislative frameworks underpinning disaster response and management;
- Describe the role of governments and response agencies within the legislative framework;
- Describe the impacts of terrorism on the evolution of emergency management systems;
- Discuss the psychosocial and cultural impacts of disasters on community, governments and emergency service and recovery organisation personnel;
- Describe the statutory powers of the emergency services in the context of a major incident;
- Discuss concepts of emergency law as it applies to emergency and support services in the context of a major incident.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:
- Define the historical aspects of natural and human made disasters;
- Describe the historical aspects of natural and human made disasters.
- The political, psychosocial and cultural context of disaster.
- Government and legislative frameworks and emergency management systems.
- The historical aspects of natural and human made disasters.
- The political, psychosocial and cultural context of disaster.
- Government and legislative frameworks and emergency management systems.

**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).

HHP5102 DISASTER PLANNING AND PREVENTION

Campus Internet Australia

Prerequisites Appropriate Undergraduate qualification or equivalent

Learning Outcomes Upon successful completion of this subject the student will:

- 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.
- 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 additional considerations in counter disaster planning including disaster plans, crisis pressure and information management.
- 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.
- Roles and responsibilities of Government and Non-government agencies in disaster planning and prevention, in particular coordination, capability, capacity and inter-operability.
  - Describe and discuss the roles and responsibilities of Federal, State and 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:

- Risk assessment, mitigation and management models.
- Models of planning and prevention in the national and international context.
- Federal, State/Territory and Local Government disaster policy and plans.
- Roles and responsibilities of Government and Non-government agencies in disaster planning and prevention, in particular coordination, capability, capacity and inter-operability.


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:

- 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.
- 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.
- 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.
  - Interagency liaison.
  - Identify forums for communication between agencies to discuss disaster preparedness.
  - Discuss the process of engagement of other agencies in disaster preparation.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- International assistance liaison.
  - Discuss the roles, responsibilities and obligations of federal, state/territory, local government and all agencies.
- Resource management.
  - Identify government/agency specific responsibilities for resource management in the context of disaster preparation.

Content
This subject will contain:
- Counter Disaster Training and Education.
- Community and other stakeholder engagement.
- Assessment of preparedness.
- Interagency liaison.
- International assistance liaison.
- Resource management.

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).

HHP5104 DISASTER RESPONSE

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
- Discuss 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
- 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

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

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

Prerequisites
Appropriate Undergraduate qualification or equivalent

Co-requisites

Learning Outcomes
Upon successful completion of this subject the student will be able to:
- Describe the specific roles and responsibilities of selected specialist emergency service organisations
- Describe the importance of inter-service communication, liaison and education
- Identify key aspects of disaster planning, prevention, preparedness, response and recovery specific to each organisation
- Describe common problems associated with multi-service response to a disaster
- Identify strategies to improve multi-service communication and response
- Demonstrate principles of effective disaster response from a multi-service perspective
- Describe essential resources required by each emergency service organisation
- Describe the principles of command and control from a multi-agency response
- Demonstrate effective elements of command and control

Content
This subject will contain:
- Characteristics of specialist response to a disaster situation including:
  - Health
  - Ambulance
  - Police
  - Fire
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).
- Analyse and evaluate strategies relating to issues of social and cultural diversity in the emergency management context (D2).

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).
- Analyse 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.
- Discuss the major considerations of logistics in the disaster cycle, planning, preparedness, response and recovery.
- Discuss the management, administration and financial considerations of logistics in the context of a diaster.
- Discuss 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.
- Discuss 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 breach 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.

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).

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 evaluate published research reports
• Demonstrate the ability to prepare a literature review
• Demonstrate the ability to write a clear and concise a 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
• 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/discussions 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, 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).

HHR3124 ACUPUNCTURE AND MOXIBUSTION: MICROSYSTEMS
Campus VU/Gold Coast Institute of TAFE (GCIT)
Prerequisites
As arranged and negotiated by GCIT and VUT.

Co-requisites

Learning Outcomes
At the satisfactory completion of this subject, students will be able to: determine the principles underpinning the application of a micro-system treatment; determine when it is appropriate to apply a micro-system approach; justify micro-system point selection; identify functions and precautions relevant to points used in micro-system acupuncture; apply micro-system treatments including justify micro-system point selection in the clinical situation; correctly locate and state the common functions of points used in micro-system acupuncture; explain the relationship between micro-systems and other methods of Chinese medical diagnosis such as bian zheng lun zhi. 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
• ear acupuncture,
• head (scalp) acupuncture practice,
• hand, foot, face, nose and eye acupuncture micro-system practice;
• Jinkyo-acupoint acupuncture and skin sections practice;
• the use of electronic devices including electro-acupuncture and other technologies in micro-system point location, diagnosis and therapy;
• application of combined micro-system and standard acupuncture point treatment principles and protocols.
**Required Reading**

**Recommended Reading**

**Class Contact**
The equivalent of 4 hours a week for one semester, comprising of seminars and clinical workshops/practice.

**Assessment**
One practical and oral assessment weighted at 50% each.

---

**HHR3234 ACUPUNCTURE AND MOXIBUSTION: THERAPEUTIC APPLICATIONS**

**Campus**
GCIT

**Prerequisites**
As arranged and negotiated by GCIT and VUT.

**Co-requisites**

**Learning Outcomes**
By the end of the unit the student is expected to be able to propose and defend a tentative diagnosis, critically assess the means by which the diagnosis is arrived at, propose a management strategy and management approaches specific to a client and their social milieu, of disharmony, recognise the connection to biomedical patterns and TCM patterns of disharmony, propose and discuss treatment and management approaches specific to a client and their social milieu, identify and investigate areas of TCM where there is a ‘gap’ in one’s knowledge base.

**Content**
A Chinese medical perspective of; gynaecological and fertility conditions, obstetrics, pediatrics, substance abuse, skin conditions, HIV/AIDS and cosmetic acupuncture.

**Required Reading**

**Recommended Reading**

**Class Contact**
The equivalent of 4 hours a week for one semester.

**Assessment**
One take home assignment due at the end of semester and one exam 50% each.

---

**HHR4114 A & M CLINICAL MEDICINE 3**

**Campus**
St Albans

**Prerequisite(s)**
HHR3244 A & M Therapeutic Applications; HHR4114 A & M Clinical Medicine 1; HHR4124 A & M Clinical Medicine 2; HHP3434 Counselling Skills for TCM Practitioners; HHA3254 Clinical Practice (A&M) 4; or equivalent.

**Content**
Using a wide range of case studies, students will undertake TCM differential diagnosis, establish the treatment principle, develop a treatment and management plan and where appropriate carry out treatment under supervision for clients experiencing the following: jing luо disharmonies; zang fu disharmonies; fundamental substance disharmonies; wu dian (five changes) disharmonies; san jiao disharmonies; 8 extra meridian disharmonies; four radical disharmonies; mixed disharmonies; continuing development of communication skills; exploring the many facets of the client/practitioner relationship.

**Required Reading**
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 behaviours. 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%).
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:
• Discuss how the Nei Jing has informed CM practice;
• Evaluate the meaning, relevance and application of Nei Jing historical perspectives;
• Evaluate the significance of ancient medical wisdom in contemporary Western settings;
• 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.


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:
• 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 lu]; basic classification of disharmonies (tian zhen lun zhi); etiology 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.
• Explain basic herbal properties and functions according to CM herbal theories including the four qi (si qi), 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;
• Discuss the importance of the relationships between the Eight Guiding Principles, diagnosis and treatment in Chinese medicine;
• 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 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 jing luo interrelationships; mechanisms of disease development; basic herbal properties, functions and theories; Si Qi, Wu Wei, four directions, courier herbs, classification, compatibility, cautions, contraindications, quality, harvesting.


Class Contact Hours Eleven (11) 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 assignment (1200 words) (30%); one combined written examination (40%) and one oral examination (20%).

Additional Statements Workshops have a hurdle requirement of at least 80% attendance.
HHT1005 CHINESE MEDICAL DIAGNOSIS AND PATHOGENESIS 1
Campus St Albans
Prerequisite(s) Nil

Learning Outcomes
- Analyze the presentation of symptoms using bian zhen 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);
- Recognize symptom patterns of disharmony as understood according to main theories of Chinese medicine (including; Yin Yang Theory, Five Phase [Wu Xing] Theory, Zang-Fu Theory, Theory of Qi, Blood and Body Fluids (fundamental substances), Meridian Theory [Jing-Luo]; Theory of Six Clarity Levels and Theory of San Jiao) and understand the relationship between disease, syndrome and symptom;
- Describe the aetiology (external, internal 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);
- Utilize the four examinations;
- Differentiate between pathogenic attacks on organs, meridians, fluids and qi and suggest appropriate treatment principles for each;
- Outline clear, logical and accurate therapeutic objectives;
- Discuss the type and level of treatment according to the Eight Guiding Principles and bian zhen lung zhi and concepts of ben and biao, reinforcement and reduction;
- Link the pathogenesis of symptom manifestation to treatment principles and appropriate acupuncture point and individual herb selection;
- 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, wu xing 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 symptom differentiation; Materia Medica and Jing-Luo system consolidated in relation to diagnostic treatment design.

Required Reading

Recommended Reading

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:
- Utilize the five (5) flavours and four natures theories to predict functions of herbs and foods;
- 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);
- 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);
- Utilize channel tropism theory and name the traditional categories of herbs;
- Explain the naming protocols used in Chinese medicine;
- Recognize the names of herbs using pinyin transliteration, common name or Latin binomen;
- Recognize selected processed herbs on sight;
- Classify herbs and foods according to traditional categories;
- 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;
- Select herbs of similar properties for different clinical situations;
- Relate the functions of herbs to basic herbal medicine theories;
- 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.

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 that 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, aromatically 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.

Required Reading

Recommended Reading

On successful completion of this unit, it
Introduction to Chinese medical literacy. Melbourne: Victoria University of Technology, School of Health Science.

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: P2,12,02,W2,A2,C2,D2.

HHT1009 INTRO TO CHINESE MEDICINE 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:

- Demonstrate skills as a beginning assistant in the clinical context (including demonstrating a professional approach to clients, adherence to principles of hygiene);
- Work as part of a team in clinic;
- 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;
- Discuss and reflect on their observations and experiences from a CM perspective;
- 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 Albans
Prerequisites Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

- Explain at a basic level the principles and methods of health preservation and enhancement in Chinese medicine.
- Perform basic Qi Gong and Tai Ji Quan techniques
- Describe the key features required for a balanced lifestyle from the Chinese medical perspective.
- Explain the benefits of tai ji quan and qi gong exercises sufficient for a lay person to understand.
- Explain the importance of a balanced diet and lifestyle in the preservation of health.

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 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.


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 Albans

Prerequisite(s) Nil

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

- Accurately locate the acupuncture points utilizing proportional measurements and surface landmarks.
- Outline the composition and function of the Jing Luo system and the distribution and connection of each of the various components of the system;
- Describe the surface anatomy associated with locating and needling acupuncture points;
- Describe the depths of needling of acupuncture points;
- State the contraindications of specific acupuncture points;
- 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;
- 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-luo 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.


Subject Hours
Required Reading

per week in semester one; HHT1157 Minor Thesis (part time), six 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.

HHT1159 MINOR THESIS E 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.
SCHOOL OF HEALTH SCIENCES

HHT1201 ACUPUNCTURE POINT LOCATION 2
Campus St Albans.
Prerequisites HHT1101 Acupuncture Point Location 1; or equivalent.

Course Content

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

- Accurately locate the 400 acupuncture points (including extra points) utilizing proportional measurements and surface landmarks;
- Outline the composition and function of the Jing Luo system and the distribution and connection of each of the various components of the system;
- Describe the surface anatomy associated with locating and needling acupuncture points;
- Describe the depths of needling of acupuncture points;
- Discuss the contraindications of specific acupuncture points;
- 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;
- 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:

- Explain the principles and methods of health preservation and enhancement in Chinese medicine;
- Outline the features of a balanced lifestyle from the Chinese medical perspective;
- Discuss the principles of mental cultivation and the relationship between mental state, lifestyle, disease and longevity;
- Evaluate the principles of TCM dietary regulation and explain the use of diet in the maintenance of health;
- Demonstrate the preparation and explain the functions of specific health food dishes (with emphasis on balancing yin and yang);
- Evaluate the use of Chinese medical dietary therapy in the treatment of common diseases;
- Explain the principles of TCM health preservation and enhancement through physical and breathing exercises;
- Demonstrate specific physical and breathing exercises;
- 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).


Class Contact Hours Three hours per week or equivalent for one semester comprising lectures, laboratories, demonstrations 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 assessment (50%); one theory examination (50%). All assessment items address the CGA levels as indicated in the Learning Outcomes.

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 Pharmacology.

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 amongst 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 Luo (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 (with an emphasis on combined patterns of disharmony). Theory of Qi Xue Jing Ye, and Theory of Jing Luo (Meridians and Collaterals), and explain the aetiology and pathogenesis of such signs, symptoms and syndromes, and the treatment principles; 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’; inclusion of palpation of channels andarterial pulse; and detailed description of the differential diagnostic process; disease aetiology illness, Jing luo syndromes, Zang-fu mixed syndromes, febrile disease differentiation – six channels complicated patterns; Wen Bing detail combining Zang Fu, San Jiao and Lateral 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

Course Code: 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 Chaozi, Mi Zhi, and Han Zhi; 8. Demonstrate different preparation methods for dispensing, such as decoction, infusions, boluses, salves, powders, 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 responsiveness.

Content The lesser used herbs from the categories of the Materia Medica: release exterior heat, drain downward, drain dampness, expel wind-damp, transform phlegm and stop cough, aromatically 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, Indicators, Pao Zhi theory and practical.


Class Contact: The equivalent of 72 hours for one semestercomprising lectures, tutorials and laboratories.

Assessment: One written assignment (1200 words) (20%); one combined practical and oral assessment (40%) (proficiency standard hurdle requirement); one 2-hour written theory 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. Laboratory sessions have a hurdle requirement of at least 80% attendance.

Recommended Reading To be advised by Lecturer.

Class Contact 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 report(s) from clinical placement(s) (pass/fail) (hurdle requirement); combined practical and oral examination (proficiency requirement); combined practical and oral examination (proficiency requirement); combined practical and oral examination (proficiency requirement); combined practical and oral examination (proficiency 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.

HHT2100 FORMULAE AND STRATEGIES 1

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:

• Place in context the history and development of Chinese medicine
• 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);
• Use composition and change theories
• Explain the eight (8) treatment methods
• Discuss types and usages of formulae in the following categories: release exterior, downward draining, heat clearing, internal warming, tending dryness (be able to compare and contrast the compositions, actions and indications of principle formulae that belong to the same formulae category; distinguish the most appropriate formulae to achieve a particular therapeutic effect; and describe the differences between classical design/formulations and commercial productions of medicines);
• Discuss the compositions, functions (therapeutic applications), indications, contraindications, applications, methods of preparation and administration and dosages of traditional formulae in the following categories: release exterior, downward draining, harmonizing, heat clearing, internal warming, tending dryness (including how to advise patients on preparation, administration, cautions/contraindications and actions to take in event of unexpected adverse reaction)
• Suggest modifications to formulae according to clinical presentations (including those necessary due to restrictions on access to and use of potentially toxic herbs and endangered species under Australian regulations)
• 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 Six hours per week or equivalent for one semester comprising lectures and tutorials. Students should reasonably expect to devote at least 15 hours of study outside class contact hours of at least three times more than the stipulated class contact hours.

Assessment One written examination (end-of-semester) (100%). This unit is a hurdle requirement.

HHT2104 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 1

Campus St Albans

Prerequisite(s) HHT1201 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:

• Describe the surface anatomy associated with locating and needling acupuncture points;
• Describe the depths of needling of acupuncture points;
• Locate and correctly needle acupuncture points and obtain the de Qi sensation;
• ‘Read’ the radial pulse;
• Comply with aseptic techniques and procedures when penetrating the skin;
• Demonstrate and ascertain the appropriateness of other techniques such as cupping, moxibustion or gua sha;
• Discuss Jing-luo theory and its application to clinical practice;
• Explain acupuncture point dynamics and function;
• Describe the pathways and functions of the sinew (tendo musculo) meridians, divergent channels, luo mai and other adjective meridian systems;
• Explain the roles of the Chinese Medicine practitioner in infection control and the management of needle accidents;
• 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, needle insertion; 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-tendo 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.


**HHT2200 FORMULAE AND STRATEGIES 2**

**Campus St Albans**

**Prerequisite(s)** HHT2100 Formulæ and Strategies 1; or equivalent

**Student Learning Outcomes:** On successful completion of this unit, it is expected that students will be able to:

- Elaborate on how CM theories are applied to acupuncture diagnosis and treatment;
- Discuss the compositions, function, indications, contra-indications, commercial productions of medicines; discuss the relationships amongst traditional pharmacopoeia and formula construction;
- Discuss the compositions, functions, indications, contra-indications, applications, methods of preparation and administration and dosages of the traditional and some advanced formulae with a focus on the following formulae categories: expel dampness, treat phlegm, regulate qi, tonify qi, tonify yin, tonify yang, 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);
- 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);
- 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 fourteen categories in which formulæ are assembled. Formula construction. Advanced formulæ. Treatment strategies. Functions, indications and associated treatment principles. Classical and modern applications and interpretations of formulæ. Relationship to clinical usage. Differentiation amongst similar formulæ. Guidelines for determining correct formulæ for particular clinical situations. Notions of dosage and the appropriateness of varying dosages. Formulæ in the categories of: expel dampness, resolve phlegm, regulate qi, tonify qi, tonify yin, tonify yang, blood, stop bleeding, stabilise and bind, calm shen and others. Formulae modifications.


**Class Contact** Six hours per week or equivalent for one comprising lectures and tutorials semester. Students should reasonably expect to devote additional private contact hours of at least three times more than the stipulated class contact hours. Assessment: One essay (1000 words) (30%); one written examination (end-of-semester) (70%).

**HHT2202 ACUPUNCTURE THEORY SYSTEMS AND METHODS**

**Campus St Albans**

**Prerequisite(s)** Nil

**Learning Outcomes** On successful completion of this unit, students will be able to:

- Explain the various acupuncture-related CM theories;
- Elaborate on how CM theories are applied to acupuncture diagnosis and treatment;
• Evaluate the appropriateness of CM theories to specific clinical cases;
• 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 transporting points, special point groupings (e.g., hui meeting points, xi cleft, source (yuan), shokanten, 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, 2 zu liu zhu, eight influential points, entry and exit points, sea points and the ten rules of point selection to the practice of acupuncture.


Class Contact Three (3) 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 3 times more than the stipulated class contact hours.

Assessment One assignment (1500 words) (40%); one examination (60%).

HHT2203 CHINESE MEDICINE CLINICAL PRACTICE 2

Course Adheres to the School of Health Sciences CM Program Learning Outcomes. Students will be able to:

Risk and Safety Understand and apply safe and effective infection control guidelines. Students will be able to:

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);

HHT2205 ACUPUNCTURE NEEDLING: THEORY AND PRACTICE 2

Course Adheres to the School of Health Sciences CM Program Learning Outcomes. Students will be able to:

Demonstrate the depths of needling of acupuncture points;

Locate and correctly needle acupuncture points and obtain the de Qi sensation for a range of acupuncture points including difficult-to-needle points;

Demonstrate more advanced needle manipulation skills;
• ‘Read’ the radial pulse;
• Comply with aseptic techniques and procedures when penetrating the skin;
• Demonstrate a more advanced level and ascertain the appropriateness of other techniques such as cupping, moxibustion or gua sha;
• Demonstrate plum blossom needling and three edged needle bleeding techniques;
• Discuss Jing-luo Theory and its application to clinical practice;
• Explain acupuncture point dynamics and function;
• Describe the pathways and functions of the sinew (tendino muscle) meridians, divergent channels, luo mai and other adjunctive meridian systems;
• Explain the roles of the Chinese Medicine practitioner in infection control and the management of needle accidents
• 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 of cupping. Review of needle point 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.

**Required Reading**


**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.

**HHT3003 COUNSELLING SKILLS FOR CHINESE MEDICAL PRACTICE**

**Campus**

St Albans

**Prerequisite(s)**

HHI2020 Chinese Medicine Clinical Practice – Herb Major 2; or HHI2020 Chinese Medicine Clinical Practice – Acupuncture Major 2; or equivalent.

**Student Learning Outcomes**

On successful completion of this unit, students will be able to:

- Describe the commonly used counselling skills that facilitate effective communication;
- Analyse the importance of effective communication within a clinical setting;
- Discuss from both a modern psychotherapy and a CM perspective the different facets of person and personality;
- Demonstrate basic counselling and interpersonal skills in relation to both classroom and clinical settings;
- 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 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. In 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**


**Recommended Reading**


Class Contact Four hours per week or equivalent for one semester comprising lectures, seminars and workshops.

Assessment Two case studies (25% each); one assignment (1500 words) (50%); reflective journal (hurdle requirement). All assessment items address the CGA levels as indicated in the Learning Outcomes.

HHT3100 CHINESE MEDICAL MICRO-SYSTEMS

Campus St Albs

Prerequisite(s) RMB1910 Microbiology for Chinese Medicine Practitioners; HHT2205 Acupuncture Needling: Theory and Practice 2; or equivalents.

Student Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

- Discuss the principles underpinning the application of micro-system treatment including ear acupuncture and scalp acupuncture.
- Explain the history and theoretical basis of the ear and scalp acupuncture micro-systems;
- Explain the rationale for selection of a micro-system approach;
- Justify micro-system point selection in the clinical situation;
- Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; and appropriate social and cultural awareness and responsiveness.

Content Ear and scalp acupuncture history, theory and practice; ankylo-capsular acupuncture and skin sections theory and practice; scar therapy; the use of electronic devices including electro-acupuncture, laser acupuncture, TENs and other therapeutic technologies; use electronic devices for point location and diagnosis in micro-systems;


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 Albs, 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:

- Demonstrate skills consistent with working successfully as an assistant practitioner and as part of a team within a Chinese medicine clinic;
- Mentor junior students in the clinic;
- Further develop their Chinese medical diagnostic skills from the perspective of Si Zhen;
- Practice moxibustion, cupping, gua sha, shi liao and acupuncture in the clinical setting (including appropriate management of materials and equipment);
- Consolidate their ability to select acupuncture points, practice safe needle insertion and manipulation (and explain how this can achieve specific therapeutic outcomes);
- 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);
- Correctly identify raw herbs, scrutinise a herbal prescription (for errors, omissions, correct dosage) and fill a herbal prescription (preparation, dispensing);
- Explain treatment protocols and different preparation methods and uses of herbs to clients (including actions to be taken after finishing the prescription);
- Use the checklist of criteria on placement expectations for ongoing learning in the clinical setting;
- Explain the management and daily operation of the Chinese medicine clinic;
- Exhibit developing interpersonal skills with supervisors, fellow students and clients;
- Demonstrate consolidation and establishment of attributes in effective problem solving and clinical reasoning; 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, Shliao 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 notion of pathogenesis and relationship to herbal prescriptions. Materia Medica substitutions, advanced herbal recognition.


HHT3104 MAJOR CLASSICS – SHANG HAN LUN & WENG BING 1

Campus St Albans
Prerequisite(s) HHT2003 Chinese Medical Diagnosis and Pathogenesis 2; 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:

- Place in context the history and development of medical ideas encountered in the shang han and wen bing (and the Jing Guo 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);
- Apply methods of pattern identification from a shang han and wen bing perspective;
- Discuss the specific diagnostic techniques used in wen bing;
- Explain the relationship between liu jing bian zheng and wei qi ying xue bian zheng (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 Zang-fu Theory and the Theory of Triple Jiao);
- Discuss and apply principles of treatment and appropriate formulæ according to Shang Han and Wen Bing (for each of the syndromes, describe the sign-symptom complexes, key formulæ and their component herbs, common modifications, any special preparation, indications, cautions and contraindications and comparisons with other formulæ);
- 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 the history of ideas in Chinese medicine. Underlying theories associated with these two texts. Comparison of the Shang Han and Wen Bing treatment strategies.
- Onset and transmission of disease according to Shang Han and Wen Bing. The concept of Pattern Identifications by the Six Channels. The concept of externally pathogenesis and auto-immune diseases; treating auto-immune diseases; and transmuted patterns associated with the six meridians and sign-symptom patterns associated with the ‘four aspects’;
- Describe the relationship between liu jing bian zheng and wei qi ying xue bian zheng;
- Discuss and apply principles of treatment and appropriate formulæ (and modifications) according to Shang Han and Wen Bing (in the treatment of a range of disorders including modern diseases);
- Evaluate the latent pathogen theory and its modern application to treating auto-immune diseases;
- Differentiate amongst pulse states according to symptom complexes;
- Justify the shang han and wen bing treatment strategies and formulæ (including in the context of modern clinical practice and evidence-based research);
- 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.

Assessment

- One written assignment (1500–2000 words) (30%); one written examination (70%).

Recommended Reading


Course 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 Learning Outcomes

- 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’);
- Describe the relationship between liu jing bian zheng and wei qi ying xue bian zheng;
- Discuss and apply principles of treatment and appropriate formulæ (and modifications) according to Shang Han and Wen Bing (in the treatment of a range of disorders including modern diseases);
- Evaluate the latent pathogen theory and its modern application to treating auto-immune diseases;
- Differentiate amongst pulse states according to symptom complexes;
- Justify the shang han and wen bing treatment strategies and formulæ (including in the context of modern clinical practice and evidence-based research);
- 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 formulæ.

Assessment

- One written assignment (1500–2000 words) (30%); one written examination (70%).

Recommended Reading


Course Contact

- Hours Five 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 written assignment (1500–2000 words) (30%); one written examination (70%).

HHT3106 INTERNAL MEDICINE 1

Campus St Albans
Prerequisite(s) HHT2003 Chinese Medical Diagnosis and Pathogenesis 2; HHT2200 Formulæ and Strategies 2; HHT2205 Acupuncture Needling: Theory and Practice 2; or equivalents.

Student Learning Outcomes

- Classify disorders according to the CM framework;
**SCHOOL OF HEALTH SCIENCES**

- Apply bian zheng lun zhi approaches to the differentiation of dis harmonies;
- Devise treatment strategies that address the patterns of disharmony present in Nei Ke disorders;
- Formulate interventions using herbal formulae or acupuncture prescriptions;
- Formulate Chinese Medicine dietary therapy according to the differentiation of disorders;
- Propose lifestyle modifications according to CM principles;
- 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 for treatment and potential drug-herb interactions) and when referral to western medical practitioners is necessary;
- 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 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 internal medicine disorders as they relate to the following systems: respiratory, cardiovascular, endocrine and musculoskeletal. This unit will also include shen disturbances and ‘modern diseases’ amenable to Chinese medicine treatment.

**Required Reading**


**Recommended Reading**


**Assessment**

- One final written cases examination (50%); one final written theory examination (50%). This unit is a hurdle requirement.

**Assessment**

- Critical examination of the means by which a diagnosis is reached;
- Demonstrate clinical skills in Chinese medicine diagnosis for Nei Ke conditions;
- Classify Nei Ke disorders according to broad Chinese medicine disease categories;
- Differentiate Nei Ke disorders according to Bian Zheng Lun Zhi;
- Propose management strategies including practitioner advice, counselling and client self help tasks (including health preservation and enhancement advice referred to other health practitioners);
- 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;
- Apply specific clinical techniques to a range of particular conditions (including acupuncture, moxibustion);
- Explain in professional terms and in plain English, proposed treatment strategies with respect to the client’s condition(s);
- Explain the relationship between pulse-taking during the needling process, particularly in relation to the notion of moving Qi by needling;
- 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 focus of this unit is to prepare 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**


**Recommended Reading**


**Assessment**

- Applicable attendance requirement and appropriate participation as outlined in the unit outline (hurdle requirement); one assignment (1500 words) (40%); one practical examination (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:  
- Critically assess and reflect on the means by which a diagnosis is reached;  
- Demonstrate clinical skills in Chinese medicine diagnosis for Nei Ke conditions;  
- Classify Nei Ke disorders according to broad Chinese medicine disease categories;  
- Differentiate Nei Ke disorders according to Bian Zheng Lun Zhi;  
- 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);  
- 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);  
- Apply specific clinical techniques (including acupuncture, moxibustion) to a range of particular conditions;  
- Evaluate in professional terms and in plain English, proposed 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);  
- Use the checklist of criteria as a guide for on-going learning in the clinical setting;  
- Explain the relationship between pulse-taking during the needling process, particularly in relation to the notion of moving Qi by needling;  
- 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 acupoint selection, discrimination between points and herbal prescription.  


**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:  
- Assume an increasing range of responsibilities in the management of clients in clinical settings;  
- Perform safely, competently and efficiently as assistants and as members of a team in Chinese medicine clinics;  
- Assist junior students to correctly identify raw herbs, correctly fill and scrutinise valid herbal prescriptions;  
- Mentor junior students in clinics;  
- 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 formulation prescriptions; case history documentation;  
- Explain and justify the formulation of a diagnosis and treatment plan including an acupuncture and herbal prescription and explain how this achieves therapeutic aims;  
- 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);  
- Explain treatment protocols and different preparation methods and management of materials and equipment;  
- Explain the management and daily operation of the Chinese medicine clinic;  
- Exhibit developing interpersonal skills with supervisors and colleagues;  
- 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 manipulation techniques; the appropriateness of applying other therapeutic methods such as electro-acupuncture, laser therapy, muscle energy testing approaches, shi liao and other micro-systems approaches. Herbal formula prescriptions. Advanced dispensary work – ordering stock in consultation with a supervisor, cost appreciation and prescription accounting. Assisting practitioner as required; providing preliminary diagnostic reports to the practitioner; carrying out therapeutic procedures as required by the practitioner.  


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 repeated 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:
• Classify disorders according to the CM framework;
• Apply bian zheng lun zhi approaches to the differentiation of disharmonies;
• Devise treatment strategies that address the patterns of disharmony present in Nei Ke disorders;
• Formulate interventions using herbal formulae or acupuncture prescriptions;
• Formulate Chinese Medicine dietary therapy according to the differentiation of disorders;
• Propose lifestyle modifications according to CM principles;
• 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;
• Explain the relationships between the pathomechanics of disorders and the components of the treatment intervention (using herbal prescription or acupuncture);
• 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 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.


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 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

Prerequisite(s) Nil.

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
• Justify research in the field of Chinese medicine;
• Identify research question in the field of Chinese medicine;
• Describe various methods of research in quantitative and qualitative research;
• Critique and evaluate research studies and articles, including those in Chinese medicine;
• Identify ethical issues associated with conducting research, including CM research;
• Discuss the requirements, limitations and applications of research in Chinese medicine clinical practice;
• Discuss issues in the research process as they relate to evaluation of health care practice, programs and policy development;
• Explain the roles of databases in research;
• Explain, in professional and lay terms, research studies from the Chinese medicine literature;
• 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 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.


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:

- 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);
- Incorporate the practical aspects of practice management 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);
- Develop a vision of their own future practice;
- Evaluate the facilities, services and other modalities, including sources of finance, available to practitioners establishing a practice;
- Describe and identify the professional, legal and ethical requirements associated with a Chinese medicine practice (including the government regulations for skin penetration, infection control, drugs and poisons legislation, and the regulatory requirements that impact on herbal medicine practice and dispensing);
- Prepare short-term and mid-to-long term business plans for their own research anticipated practices;
- Provide solutions, including a range of marketing strategies, for typical and atypical dilemmas associated with establishing and maintaining a practice;
- Discuss the features of selected alternative health care modalities and multi-disciplinary clinics;
- 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.


Class Contact Hours The equivalent of 48 hours per semester comprising lectures, tutorials and student directed learning.

Assessment Class presentation (30%); public presentation report (800 words) (20%); written assignment (1500 words) (50%); subject participation (80% attendance requirement and appropriate participation) (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.

**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, treatment, monitoring and 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 HBAD 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:
- Apply advanced CM theory and clinical practice theory to cases typically presenting at clinic;
- Retrieve and evaluate scientific articles and other electronic material applicable to specific and common case presentations in a range of CM clinical specialties;
- Explain the rationale of diagnoses and treatment selections including point and herb functions in terms of Chinese medicine theory and pathophysiology;
- Discuss the protocol of the Bian Zheng Lun Zhi method of prescribing treatments;
- Design and present holistic treatment strategies and plans, incorporating the principles of health preservation, with particular emphasis to an Australian patient base;
- Communicate case material in a professional style sufficient to facilitate effective handover;
- 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 aspecic 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.


**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:
- Place in context the history and development of CM gynaecology and obstetrics;
- Discuss the concept of Yue Jing (period) according to Chinese medicine;
- Discuss the relationship between the Bao Gong (uterus) and the Jing-Lou;
- Classify gynaecological disorders according to broad Chinese medicine disease categories;
- 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);
- 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;
- Apply Chinese medical perspectives and treatment methods for conception, maintaining the health of the mother and fetus during pregnancy and apply various Chinese medical techniques (especially acupuncture) during labour;
- Evaluate the general treatment principles applied in CM gynaecology and obstetrics;
- Identify selected Materia Medica, including main formulae and modifications, relevant to Chinese medicine gynaecology and obstetrics;
- Predict potential drug-herb interactions and explain the actions necessary in the event of an adverse reaction;
- Evaluate roles for the treatment modalities, including herbal medicine, acupuncture and moxibustion, used in gynaecological conditions;
- Evaluate roles for hygiene and diet in the prevention and treatment of gynaecological conditions;
- 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.


Class Contact Hours 6 hours/week or equivalent for one semester comprising lectures and tutorials. Assessment One assignment (1500 words) (50%); one 3-hour examination (50%). This unit is a hurdle requirement for graduation.

HHT4103 CHINESE MEDICINE CLINICAL INTERNSHIP 1

Campus St Albans Campus.

Prerequisite(s) Satisfactory completion of year 3 of the HBAH degree; or equivalent

Co-requisite(s) HHT4100 Case Conference & Clinical Issues 1; or equivalent

Student Learning Outcomes: On successful completion of this unit, it is expected that students will be able to:
- Use advanced acupuncture and Chinese medicine theory;
- Demonstrate professional skills, attitude and presentation;
- Reflect on their experience of the consultation process (including diagnosis, treatment approaches and communication skills);
- Conduct a comprehensive Chinese medical assessment including procedures to minimise patient distress, embarrassment or risk of injury, propose a diagnosis and treatment strategy;
- 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);
- Obtain feedback from clients and explain to the client the clinical significance of both negative and positive findings in plain English;
- Locate and needle accurately and safely acupuncture points appropriate to client's needs;
- 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;
- 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);
- Demonstrate understanding of the necessity requirements of and proficiency in maintenance of a herbal dispensary (including understanding requirements for labelling and storage, inventory and contamination control);
- Record casenotes in a professional manner (legal (legible, accurate, orderly) that would satisfy professional guidelines and would withstand legal scrutiny);
- Assess the client'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 client in plain English;
- Liaise and work effectively with clinical educators;
- Demonstrate consolidation and establishment of attributes in effective problem solving, 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 time in the School of Health Sciences’ Teaching Clinics and other approved clinics to gain broad clinical experience in both acupuncture and herbal therapies. 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 supervised intern practitioner: take case histories, define diagnoses and treatment principles, identify appropriate herbal formulae that could become the basis for the final prescription; formulate acupuncture prescriptions; perform acupuncture and moxibustion as appropriate. 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 practitioners 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. The Internship practicitioners will have opportunities to provide mentorship 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 process, the Intern Practitioner has the responsibility to ensure School of Health Sciences Teaching Clinics policies and procedures are followed.


Class Contact: A minimum of one hundred and fifty-six(156) hours in an approved clinical setting normally spread across one entire semester (hurdle requirement).

Assessment: Supervised placement comprising successful completion of required 156 clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (50%) (hurdle requirement); combined clinical and theoretical examination (50%) (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.
musculo-skeletal dysfunction and the jing luo system, and the musculo-skeletal assessment techniques, the relationship between the musculo-skeletal system. Various traditional and contemporary specific to particular musculo-skeletal and neurological disorders; the musculo-skeletal and neurological disorders, rehabilitative exercises treatments; the significance of drug-herb interactions as applicable to neurological disorders; the application of internal and external herbal syndrome and Wei syndrome, regional disorders, spinal disorders, include in-depth analysis of treatment and management of pain, Bi depth exploration of pain, including its explanation in Chinese medical and applies the information to the assessment and management of Content protocols and application of acupuncture, point injection therapy, laser Required Reading Flaws, B. 1985, Tieh ta ke: Traditional Chinese Traumatology and First Aid Blue Poppy Press, Boulder, Colorado Table 1. Australian First Aid Emergency, (Ed. 2) Australian First Aid, Melbourne, Australia Infection Control Guidelines for Acupuncture 1997, Brisbane Zhu, M. 1992 A Handbook for Treatment of Acute Syndromes by using Acupuncture and Moxibustion. Translated by Dale Chow King. 8 Dragons Publishing, Kowloon, HongKong and Chinese Scalp Acupuncture Center of USA, California. Recommended Reading Acupuncture: A Comprehensive Text 1981. Shanghai College of Traditional Medicine. Translated and edited by John O'Connor and Dan Bensky, Seattle, Washington, Eastland Press. Bensky, D and Barolet, R 1990. Chinese Herbal Medicine, Formulas and Strategies. Eastland press, Seattle. Feng, T. 1983. Treatment of Soft Tissue Injury with Traditional Chinese and Western Medicine. People's Medical Publishing House Press, Beijing, China Fulde, G.W.O. 1988. Emergency Medicine: The Principles of Practice (Ed.3) MacLennan and Petty, Sydney Scott, J. 1096. The Treatment of Children by Acupuncture. The Journal of Chinese Medicine, Sussex, England. Zhang, T and Flaws, B (translated) 1987. Secret Shaolin Formulae for the Treatment of External Injury, Blue Poppy Press, Boulder, Colorado. Class Contact The equivalent of 4 hours a week for one semester. 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 HHT4108 Chinese Medicine Traumatology 1; or equivalent Co-requisites HHT4200 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: • Apply advanced CM theory and clinical practice theory to cases typically presenting at clinic; • Retrieve and evaluate scientific articles and other electronic material applicable to specific and common case presentations in a range of CM clinical specialties; • Explain the rationale of diagnoses and treatment selections including point and herb functions in terms of Chinese medicine theory and pathophysiology; • Discuss the protocol of the Bian Zheng Lun Zhi method of prescribing treatments; • Design and present holistic treatment strategies and plans, incorporating the principles of health preservation, with particular emphasis to an Australian patient base; • Communicate case material in a professional style sufficient to facilitate effective handover; • Demonstrate advanced practical skills in acupuncture, moxibustion, cupping and ancillary treatment methods;
• 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 form will be on commonly seen cases in the Chinese medicine clinical specialties. The unit reinforces aspects of apheresic techniques; 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.


Class Contact The equivalent of 72 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 VU-approved final clinical internship.

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:

• Place in context the history and development of CM dermatology;
• Discuss the aetiology, pathogenesis, main symptomatology and CM pathophysiology of identified dermatological conditions;
• 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;
• Evaluate dermatological conditions for their suitability for treatment with CM and possible needs to refer to outside health professionals including western medical;
• Justify with explanations the links between disease and syndrome diagnoses, pathogenesis, treatment principle(s), treatment strategies and appropriate prescriptions (acupuncture and/or herbal medicine);
• Prepare and deliver their oral presentation on their topic and evaluate the treatment method(s) for a particular disease);
• 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 specific disease(s)).
• 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;
• 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 while using contemporary methodologies, including formulation of 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.


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 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.

HHT4204 CHINESE MEDICINE CLINICAL INTERNSHIP TWO

Campus St Albans
Prerequisites HHT4103 Chinese Medicine Clinical Internship 1; or equivalent.
Co-requisites HHT4200 Case Conferencing & Clinical Issues 2; or equivalent.

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:
• Demonstrate independence and advanced skills in complete patient management and care;
• Use advanced acupuncture and Chinese medicine theory;
• Demonstrate professional skills, attitude and presentation;
• Reflect on their experience of the consultation process (including diagnosis, treatment approaches and communication skills);
• Conduct a comprehensive Chinese medical assessment including procedures to minimise patient distress, embarrassment or risk of injury, propose a diagnosis and treatment strategy;
• 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);
• Obtain feedback from clients and explain to the client the clinical significance of both negative and positive findings in plain English;
• Locate and needle accurately and safely acupuncture points and demonstrate an advanced level of needling techniques appropriate to client needs;
• 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;
• 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;
• Explain and demonstrate the procedures involved in the management of a herbal dispensary including storage, labelling, inventory control and contamination control;
• Record casenotes in a professional manner (legible, accurate, orderly) that would satisfy professional guidelines and would withstand legal scrutiny;
• 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;
• Liaise and work effectively with clinical educators;
• Mentor students in the clinic;
• 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 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 comprising one final dispensary practical examination (20%) (proficiency standard hurdle requirement); final combined practical and oral consultation examination (50%) (hurdle requirement); supervised placement completion (10%). 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.

HHT4275 RESEARCH METHODS FOR ACUPUNCTURE
Campus VU/Gold Coast Institute of TAFE (GCIT)
Prerequisites Nil
Co-requisites Learning Outcomes On successful completion of this unit, students will be able to:
- Justify research in the field of Chinese medicine (CM);
- Describe various methods of research in quantitative and qualitative research;
- Evaluate research studies and articles, with special emphasis on acupuncture;
- Identify ethical issues associated with conducting research, including CM research;
- Discuss the requirements, limitations and applications of research in acupuncture;
- Explain the roles of databases in research;
- Explain, in professional and lay terms, research studies from the Chinese medicine literature;
- 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 Introduction to research design; validity and reliability; hypothesis construction and testing; quantitative and qualitative methodologies; experimental and non-experimental designs; epidemiological terms used in acupuncture; ethics issues and protocols; developing and testing Chinese medicine knowledge; application of the scientific method to acupuncture; literature analysis; evaluation of research studies; scientific and literature databases; scientific writing and the communication of research.


**HUU1272 CLINICAL PRACTICUM 2**

**Campus** St Albans, City Finders, Off Campus.

**Prerequisites** HUU1171 Clinical Practicum 1, and evidence of satisfactory completion of a current 'First Aid in the Workplace Level 2' qualification; or equivalents.

**Co-requisite(s)** HHD1271 Clinical Diagnosis & Management 1, HHO1272 Osteopathic Science 2; or equivalent.

**Student Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

- 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;
- 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;
- Conduct preliminary examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;
- Participate at a rudimentary level in the decision-making associated with patient cases;
- 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;
- 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.

**Required Reading**

- 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 seventy-seven (77) 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 (77) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); twenty (20) patient observations recorded in the manner outlined in the Clinical manual (minimum 1200 words total) (hurdle requirement); one 20-minute viva voce examination (pass/fail) (hurdle requirement); one 30-minute multiple choice question (MCQ) final written examination (pass/fail) (hurdle requirement).

**HUU2274 CLINICAL PRACTICUM 4**

**Campus** St Albans, City Finders, Off Campus.

**Prerequisites** HHD1273 Clinical Diagnosis & Management 2; HHO2273 Osteopathic Science 3; or equivalent.

**Co-requisites** HHD2272 Clinical Diagnosis & Management 3; HHO2274 Osteopathic Science 4; or equivalent.

**Learning Outcomes**

- 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;
- 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;
- Conduct preliminary examination procedures in a way that minimizes patient distress, embarrassment and risk of injury;
- Participate at a rudimentary level in the decision-making associated with patient cases;
- 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;
- Record case information, including complex case notes under supervision, in a legal (legible, accurate, orderly) manner.

**Supervised placement comprising successful completion of required (12) clinical hours (pass/fail) (hurdle requirement) and overall satisfactory report(s) from clinical placement(s) (pass/fail) (hurdle requirement); twenty (20) patient observations recorded in the manner outlined in the Clinical manual (minimum 500 words total) (hurdle requirement); one 30-minute multiple choice question (MCQ) final written examination (pass/fail) (hurdle requirement).**
Content The development and extension of clinic management skills, observation of treatments and supervised examination and provision of limited client 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.


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). Clinical placement has a hurdle requirement of at least 90% attendance.

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 multiple choice examination (pass/fail) (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:

- 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, ensuring various clinic supplies are available or re-ordered if necessary, and interact with patients in an ‘easy professional’ manner;
- 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;
- Participate actively and professionally in the decision-making associated with patient cases;
- Observe accurately all aspects of the case and take a leading role in the case discussion, on observations such as patient posture, external markings, as well as on the interactions amongst the patient and the treating student and supervisor;
- Record case information in a legal (legible, accurate, orderly) manner;
- Write basic patient referral letters and exercise plans.

Content The development and extension of clinical management skills, observation of treatments and supervised provision of limited client 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.


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). Clinical placement has a hurdle requirement of at least 90% attendance.

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 multiple choice 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:

• 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;
• 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;
• Undertake a supervised treatment that uses the skills developed thus far within a reasonable time, includes the principles of practitionership, and utilises the supervisors’ input;
• Include junior students in the information collection, recording and delivery of the treatment;
• 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 clinician;
• Maintain legal (accurate, clear and legible) patient histories, write basic referral letters and recognize the need for further referral in conference with Clinical Supervisor and peers;
• Discuss a) common exercise prescriptions and their clinical use, and b) the sequelae of treatment and how to advise different sorts of patients of such; br> 8. Consider the use of over-the-counter medicines, and heat and ice compresses in the management of a patient.

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 HHU4187 Osteopathic Science 7. 7.


SCHOOL OF HEALTH SCIENCES

HHU4288 CLINICAL PRACTICUM 8
Campus St Albans, City flinders, Off Campus
Prerequisites HHU4288 Clinical Practicum 7; or equivalent.

Learning Outcomes On successful completion of this unit, it is expected that students will be able to:

• Manage a patient consultation identifying the problem, developing a working diagnosis and selecting a treatment regime that considers the presenting problem in the entirely with consideration for ethical, practical and pragmatic concerns;
• 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;
• 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;
• Mentor junior students and include these students in the treatment planning, assessment and delivery of the treatment;
• 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;
• Maintain legal (accurate, clear and legible) patient histories; write clear and accurate referral letters, requests for special examinations and basic medico-legal reports;
• Incorporate evidence in clinical practice including evidence-based clinical practice guidelines and the use of evidence in clinical decision-making;
• 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 HHU4288 Osteopathic Science 8.


SCHOOL OF HEALTH SCIENCES

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:

• Maintain legal (accurate, clear and legible) patient histories, write basic referral letters and recognize the need for further referral in conference with Clinical Supervisor and peers;
• Discuss a) common exercise prescriptions and their clinical use, and b) the sequelae of treatment and how to advise different sorts of patients of such; br> 8. Consider the use of over-the-counter medicines, and heat and ice compresses in the management of a patient.

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 HHU4187 Osteopathic Science 7. 7.


SCHOOL OF HEALTH SCIENCES
• 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;
• 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;
• 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;
• Mentor junior students and include these students in the treatment planning, assessment and delivery of the treatment;
• 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;
• Maintain legal (accurate, clear, legible) patient histories, write clear and accurate referral letters, requests for special examinations and basic medico-legal reports;
• 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;
• 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 practices 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.

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 the rules and guidelines for registration as an osteopath within Australia, visit the Osteopaths Registration Board of Victoria Web site, www.osteoboard.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 manner outlined 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 HHU1981 Clinical Practicum 9; or equivalent.
Learning Outcomes On successful completion of this unit, it is expected that students will be able to:
• Competently demonstrate a full range of osteopathic techniques;
• Competently demonstrate a wide range of clinical and patient management skills;
• Take primary responsibility for patient care from the earliest stage of their practice careers;
• Devise integrated case management plans for patients, incorporating preventive care strategies;
• Communicate effectively with other health and legal professionals, and both verbally and in writing;
• Explain the business skills required to run an osteopathic practice. In particular, students should display the following skills:
• 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;
• 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;
• 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;
• Mentor junior students and include these students in the treatment planning, assessment and delivery of the treatment;
• Evaluate the personal and professional limitations when 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;
• Maintain legal (accurate, clear and legible) patient histories, write clear and accurate referral letters, requests for special examinations and basic medico-legal reports;
• Communicate the working diagnosis, management plan, proposed referrals, contraindications and treatment risks clearly and concisely to the patient and supervisor;
• Evaluate and use evidence in clinical practice including evidence-based practice, evidence to support clinical decision making and evidence in contemporary practice;
• Plan and implement exercise programs for most common conditions, strapping and taping techniques for sports injuries, common orthopaedic surgical procedures and the likely after-effects, and the difference between the application of indirect and direct techniques in the patient setting.

Content Supervised clinical practice at the VU St Albans and Flinders Lane clinics and VU-approved external agencies. Further advancement of skills in medical and osteopathic diagnosis, ethics and business practice, advanced technique skills, and total case management. Reinforcement of integrated clinical thought from a holistic perspective via case conferencing to discuss cases and prepare for the final clinical practicum exam; written and oral presentations to peers; tutorials on advanced skills in dealing with difficult and problematic cases; and in advanced investigative skills (radiological, medical). Field visits to health care facilities and external agencies.

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 the rules and guidelines for registration as an osteopath within Australia, visit the Osteopaths Registration Board of Victoria Web site, http://www.osteoboard.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 manner outlined in the Clinical manual (pass/fail) (hurdle requirement); reflective learning tasks as outlined in the Clinical manual (hurdle requirement); one
practical clinical examination (pass/fail) (hurdle requirement); one 2-hour final written examination (pass/fail) (hurdle requirement).

HHW5105 MATERIA MEDICA 1
Campus City: Flinders
Prerequisite(s): Nil
Content: This subject will introduce students to phytochemical and pharmacological principles as they relate to herbal medicines. In addition, this subject will enable students to identify fresh plant materials used in herbal medicine. Teaching will focus on the nature of the bioactive principles and their interaction with human pathological processes used where possible. Emphasis will be on the pharmacology of herbal medicine as it pertains to clinical practice. The subject will cover the main classes of phytochemical compounds. Attention will be given to the toxicity of plants and their constituents.

Required Reading

Subject Hours: 39 hours for one semester.
Assessment: Examination, 70%; field report, 30%.

HHW5115 MATERIA MEDICA 2
Campus City: Flinders
Prerequisite(s): HHW5105 Materia Medica 1; or equivalent.
Content: This subject will introduce the student to the materia medica of Western Herbal Medicine and to the clinical application of individual plants. The subject will examine in detail the phytochemistry, history, horticulture, ecology, actions, indications, combinations, contrasting indications and toxicity of the principal western herbal medicines used in clinical practice. Skills in medicinal plant research will also be introduced.

Required Reading
- Recommended Reading

Subject Hours: 39 hours for one semester.
Assessment: Medicinal plant monograph, 70%; examination, 30%.

HHW5125 HERBAL THERAPEUTICS 1
Campus City: Flinders
Prerequisite(s): Nil
Content: In this subject students are introduced to the underlying principles that inform the therapeutic practice of Western Herbal Medicine. Students are also introduced to the treatment and management of diseases affecting the various organs and organ systems of the body using Western herbal medicines. The identification of indications and presentations requiring immediate referral will be addressed.

Required Reading

Subject Hours: 39 hours for one semester.
Assessment: Examination, 50%; assignment, 50%.

HHW5145 HERBAL THERAPEUTICS 2
Campus City: Flinders
Prerequisite(s): HHW5125 Herbal Therapeutics 1; or equivalent.
Content: In this subject the principles and practice of treating disease using Western herbal medicines are further developed. The application of Western herbal medicines to particular conditions affecting the various organs and organ systems of the body will be further developed.

Required Reading

Subject Hours: 39 hours for one semester.
Assessment: Examination, 50%; assignment, 50%.

HHW5155 CLINICAL PRACTICUM (WHM) (PART TIME)
Campus: St Albans
Prerequisite(s): Nil
Content: The clinical practicum is the prime source of client contact for the student. The student will undertake a clinical practicum throughout their course under the direction of experienced Western Herbal Medicine practitioners in their private clinics or other suitable agencies. The clinical setting will provide opportunities for the student to incorporate and utilise the theoretical knowledge gained in order to enhance their skills as a practitioner.

Subject Hours: Two hours per week, for four semesters.
Assessment: Satisfactory completion of this subject will require satisfactory reports from all clinical supervisors throughout the duration of this subject, Satisfactory/Unsatisfactory.

HHW5165 MATERIA MEDICA 3
Campus City: Flinders
Prerequisite(s): HHW5105 Materia Medica 1; or equivalent.
Content: This subject will complete the study of individual plant medicines and their clinical application. The preparation of tinctures, fluid extracts, and external applications will also be covered. Attention will be given to simple laboratory separation procedures and quality control.

Required Reading

Recommended Reading

Assessment: 50%; examination, 50%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Subject Hours 39 hours for one semester.

Assessment Examination, 50%; practical Assessment, 50%.

HHW5175 HERBAL THERAPEUTICS 3

Campus City Flinders

Prerequisite(s) HHW5125 Herbal Therapeutics 1; or equivalent.

Content

In this subject the principles and practice of treating disease using Western Herbal Medicine is further developed. The application of Western herbal medicines to particular conditions affecting the various organs and organ systems of the body will further developed. Students will also explore the many facets of the client/practitioner relationship.


Subject Hours 39 hours for one semester.

Assessment Assignment, 50%; oral Assessment, 50%.

HHY1271 PATHOLOGY 1

Campus St Albans, City Flinders, Off Campus

Prerequisite(s) HPHP1171 Physiology 1; or equivalent

Co-requisite(s) HHD1271 Clinical Diagnosis & Management 1; or equivalent.

Student Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

• Accurately use the vocabulary of basic pathology;
• Describe how cells respond to stress;
• 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;
• Describe the long-term effects of chronic inflammation on affected tissues;
• Describe the basic cellular events occurring during the repair of skin trauma;
• Explain the pathogenesis and describe the key features of the basic types of hypersensitivity;
• Recognise the pathological processes that can cause ischaemia and thrombosis, and discuss the complications of ischaemia and thrombosis;
• Describe the pathophysiological mechanisms of circulatory failure, including shock;
• Describe the factors involved in the development of infectious disease both from the perspectives of the pathogen and from the host;
• Describe the defining features of malignant and benign neoplasia, at both macroscopic and microscopic levels;
• 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 ischaemia, 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.


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 St Albans, City Flinders, Off Campus.

Prerequisites HHY1271 Pathology 1; or equivalent.

Co-requisites

Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

• Explain the pathological processes and describe their manifestations in the cardiovascular, renal and urogenital systems;
• Discuss the development of the pathological process through dysfunction to disease in the cardiovascular, renal and urogenital systems;
• Discuss the causes or risk factors associated with common and serious cardiovascular, renal and urogenital diseases, and describe how those causes or risk factors are determined;
• Describe the clinical presentations of common and serious cardiovascular, renal and urogenital diseases, including those diseases notable in Australia;
• Explain the allopathic medical approach to diagnosis, prognosis and principles of management, and the evidential basis for this approach;
• Distinguish amongst common life-threatening cardiovascular, renal and urogenital conditions, including recognising problems that require referral to other health care practitioners;
• Offer preventative health advice about common and serious cardiovascular, renal and urogenital diseases.

Content

Common and life-threatening diseases affecting the cardiovascular, renal and urogenital systems will be discussed. Particular emphasis will be given to conditions that are of special interest to osteopaths, and osteopaths in Australia.


Class Contact

Two (2) 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

Learning Outcomes

On successful completion of this unit, it is expected that students will be able to:

• Explain with confidence the manifestations and causes of common and serious respiratory, gastrointestinal and endocrine diseases;
• Discuss the development of the pathological process through dysfunction to disease in the respiratory, gastrointestinal and endocrine systems;
• Discuss the causes or risk factors associated with common and serious respiratory, gastrointestinal and endocrine diseases, and describe how those causes or risk factors are determined;
• Describe the clinical presentations of common and serious respiratory, gastrointestinal and endocrine diseases, including those diseases notable in Australia;
• Distinguish amongst common life-threatening respiratory, gastrointestinal and endocrine conditions, including recognising problems that require referral to other health care practitioners;
• Offer preventative health advice about common and serious respiratory, gastrointestinal and endocrine diseases;
• Evaluate the allopathic medical model;
• Explain the concepts of evidence-based medicine.

Content

Common and life-threatening diseases affecting the respiratory, gastrointestinal and endocrine systems will be discussed.
Particular emphasis will be given to conditions that are of special interest to osteopaths, and osteopaths in Australia.


**Class Contact** Three (3) hours per week or equivalent for one semester comprising lectures and tutorials.

**Assessment** Tutorial questions (total 30%); one 2-hour written examination (70%).

### HHY3174 PATHOLOGY 4

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

**Prerequisites** HY2273 Pathology 3; or equivalent.

**Co-requisites**

**Learning Outcomes** On successful completion of this unit, it is expected that students will be able to:

- Explain with confidence the manifestations and causes of common and serious diseases of the joints and connective tissues of the human body;
- Discuss the development of the pathological process through dysfunction to disease evident in joints and connective tissues;
- Discuss the causes or risk factors associated with common and serious joint diseases, and describe how those causes or risk factors are determined;
- Describe the clinical presentations of common and serious diseases affecting joints and connective tissues, including the diseases of note in Australia;
- Discuss the complications, diagnoses and basic treatments of conditions affecting joints and connective tissues;
- Distinguish amongst common life-threatening orthopaedic and rheumatology conditions, including recognising problems that require referral to other health care practitioners.

**Content**

**Content** will include an introduction to the following conditions affecting the joints and connective tissues of the body: bone fractures and their healing; osteomyelitis; osteoporosis; osteomalacia; Paget’s disease; fibrous dysplasia; Osteogenesis Imperfecta; osteoarthritis; hypertrophic osteoarthropathy; degenerative disease of the intervertebral disc; acute I/V disc herniation; rheumatoid disease; ankylosing spondylitis; Reiter’s disease; psoriatic arthritis; enteropathic arthritis; gout; CPPD deposition disease; systemic lupus erythematosus; progressive systemic sclerosis; polymyositis; dermatomyositis; polymyalgia rheumatica; mixed connective tissue disease. Common and life-threatening diseases will be highlighted. Particular emphasis will be given to conditions that are of special interest to osteopaths in Australia.


**Class Contact** Two (2) hours per week or equivalent for one semester comprising lectures and tutorials.

**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:

- Use an expanded their vocabulary in the area of pathology;
- Explain the aetiology, pathological stages, clinical picture, complications, and diagnosis of neurological diseases affecting the CNS and PNS;
- Discuss the basic treatments for neurological diseases affecting the CNS and PNS, and how those treatments might impact on the practising osteopath;
- 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 polyneuropathy; 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%).
SCHOOL OF MOLECULAR SCIENCES

Below are details of undergraduate and postgraduate courses offered by the School of Molecular Sciences in 2007. 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.

Higher Education

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 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>Year 2</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>
</tbody>
</table>

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 (I)

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>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>2005</th>
<th>Full Fee</th>
<th>(AUS)</th>
<th>(AUS)</th>
<th>(AUS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RCS1000 MEDICAL, FORENSIC AND ANALYTICAL CHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1008 INDUSTRIAL EXPERIENCE 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1601 CHEMISTRY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA11110MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACE1913 PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1008 INDUSTRIAL EXPERIENCE 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS1602 CHEMISTRY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA1120STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2000 INDUSTRIAL EXPERIENCE 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2521 APPLIED CHEMISTRY 2 -- ORGANIC</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2601 ANALYTICAL CHEMISTRY 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective 12 60</td>
<td></td>
<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>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2000 INDUSTRIAL EXPERIENCE 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2521 APPLIED CHEMISTRY 2 -- ORGANIC</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS2602 ANALYTICAL CHEMISTRY 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA2120MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</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>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACE3010 WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3000 INDUSTRIAL EXPERIENCE 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3601 ANALYTICAL CHEMISTRY 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3603 MEDICAL CHEMISTRY 3 A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMA3071INTRODUCTION TO COMPUTER UTILISATION</td>
<td>12</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</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>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACE3010 WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3000 INDUSTRIAL EXPERIENCE 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3602 ANALYTICAL CHEMISTRY 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3607 ADVANCED ANALYTICAL ANALYSES</td>
<td>6</td>
<td>0.0500</td>
<td>3</td>
<td>$333</td>
<td>$417</td>
<td>$833</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RCS3608 POLYMER TECHNOLOGY</td>
<td>12</td>
<td>0.0500</td>
<td>3</td>
<td>$333</td>
<td>$417</td>
<td>$833</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective (to 18cps over Session 2)(1) 18 12-36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Progression and Exclusion Regulations

1. Failure in more than 50 per cent of enrolled subjects (semester or whole of year) will be grounds for exclusion.
2. Failure in any subject three times shall constitute grounds for exclusion from the course.

### Stage Completion by Compensation

Each degree course is composed of three years.

**Year Completed**
- 0120 Completed First Year (SBCP)
- 0220 Completed Second Year (SBCP)
- 0320 Completed Third Year (SBCP)

**Stage Completed by Compensation**
- 1020 Stage Completed by Compensation, First Year (SBCP)
- 2020 Stage Completed by Compensation, Second Year (SBCP)
- 3020 Stage Completed by Compensation, Third Year (SBCP)

**Course Completed**
- 3320 Course Complete (SBCP)

Under certain conditions a student may be granted Stage Completion by Compensation for a Stage of the course even though pass results have not been obtained for all subjects in that Stage. This does not mean that a student is granted passes in the subjects failed; rather, it means that the overall performance in the Stage is such as to allow the student to progress to the next Stage of the course without repeating the subjects failed.

Stage Completion by Compensation will not be granted where a fail assessment (N1 or N2) has been obtained in any of the following subjects:

Where one or more subjects within a Stage are assessed as N1 (40-49 per cent) Stage Completion by Compensation may be granted provided that the semester hours associated with the failed subjects do not total more than eight hours (a semester hour is defined as one hour of contact per week for one semester).

A student granted a Stage Completion by Compensation should be aware that a statement to this effect will appear on the student's academic record.

### Bachelor of Science in Medical, Forensic and Analytical Chemistry (I)

**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 commences with a typical first year that exposes the student to a wide range of science disciplines. Second year has core of subjects and a selection of electives. 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. Under some circumstances, mid-year entry will be permitted.

Course Structure

<table>
<thead>
<tr>
<th>Year 1 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>RCS1000 MEDICAL, FORENSIC AND ANALYTICAL CHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1601 CHEMISTRY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBF1310 BIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA1110 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 Semester 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>ACE1913 PROFESSIONAL COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBF1320 BIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS1602 CHEMISTRY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 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>RBF2520 BIOCHEMISTRY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2502 MEDICAL CHEMISTRY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2521 APPLIED CHEMISTRY 2 – ORGANIC</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2601 ANALYTICAL CHEMISTRY 2A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 Semester 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>RCS2503 FORENSIC CHEMISTRY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2521 APPLIED CHEMISTRY 2 – ORGANIC</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS2602 ANALYTICAL CHEMISTRY 2B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA2120 MATHEMATICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 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>ACE3010 WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3601 ANALYTICAL CHEMISTRY 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3603 MEDICAL CHEMISTRY 3 A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3605 FORENSIC METHODS 3A</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMA3071 INTRODUCTION TO COMPUTER UTILISATION</td>
<td>12</td>
<td>0.0630</td>
<td>2</td>
<td>$359</td>
<td>$448</td>
<td>$798</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 3 Semester 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>ACE3010 WRITTEN AND ORAL COMMUNICATION 3</td>
<td>6</td>
<td>0.0630</td>
<td>1</td>
<td>$252</td>
<td>$315</td>
<td>$721</td>
</tr>
<tr>
<td>RCS3602 ANALYTICAL CHEMISTRY 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3604 MEDICAL CHEMISTRY 3 B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS3606 FORENSIC METHODS 3B</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>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>RCS3607 ADVANCED ANALYTICAL ANALYSES</td>
<td>6</td>
<td>0.0500</td>
<td>3</td>
<td>$333</td>
<td>$417</td>
<td>$833</td>
</tr>
<tr>
<td>RCS3608 POLYMER TECHNOLOGY</td>
<td>12</td>
<td>0.0500</td>
<td>3</td>
<td>$333</td>
<td>$417</td>
<td>$833</td>
</tr>
</tbody>
</table>

Elective (to 6cps over Session 2) 6 12-36

BACHELOR OF SCIENCE IN NUTRITION, FOOD AND HEALTH SCIENCE (I)
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.
### Course Structure

#### Year 1

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ACE1913 PROFESSIONAL COMMUNICATION</strong></td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500 $625 $1,430</td>
</tr>
<tr>
<td><strong>RBF1310 BIOLOGY 1</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RCS1601 CHEMISTRY 1A</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF1140 INTRODUCTION TO FOOD, NUTRITION AND HEALTH 1</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $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 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RMA1120 STATISTICS FOR THE BIOLOGICAL AND CHEMICAL SCIENCES 1</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF1320 BIOLOGY 2</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RCS1602 CHEMISTRY 1B</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF1145 INTRODUCTION TO FOOD, NUTRITION AND HEALTH 2</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
</tbody>
</table>

#### Year 2

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RBF2410 FOOD COMPONENTS</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF2210 NUTRITION AND FOOD ANALYSIS 1</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF2520 BIOCHEMISTRY 1</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBM2750 NUTRITION</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $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 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RBF2740 PRINCIPLES OF FOOD PRESERVATION</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF2215 NUTRITION AND FOOD ANALYSIS LABORATORY-2</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF2218 NUTRITION AND COMMUNITY HEALTH</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RNH2110 DISEASE AND HEALTH</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
</tbody>
</table>

#### Year 3

<table>
<thead>
<tr>
<th>Semester One: Core</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RBF3230 ANIMAL FOOD PROCESSING</strong></td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448 $798</td>
</tr>
<tr>
<td><strong>RBF3730 FOOD MICROBIOLOGY</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF3810 NUTRIENT AND DRUG INTERACTION</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RNH3210 SPECIAL TOPICS IN NUTRITION, FOOD AND HEALTH SCIENCE</strong></td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448 $798</td>
</tr>
<tr>
<td><strong>RNH3250</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester Two: Core</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005 Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(AUS) (AUS) (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Full Fee (AUS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RBF3235 PLANT FOOD PROCESSING</strong></td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448 $798</td>
</tr>
<tr>
<td><strong>RBF3240 FUNCTIONAL FOODS</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBM3960 NUTRITIONAL FRONTALS</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF3960 PROJECT</strong></td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712 $890 $1,584</td>
</tr>
<tr>
<td><strong>RBF3255 PRODUCT DEVELOPMENT</strong></td>
<td>6</td>
<td>0.0630</td>
<td>2</td>
<td>$359 $448 $798</td>
</tr>
</tbody>
</table>

#### 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

This Graduate Diploma 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.

(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 intellectual property, commercialization and ethical considerations.

#### 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 will be required to be, on average, at credit level in the undergraduate degree. 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

#### Course Structure

Completion of the first 8 core units (Group A) of the Master of Science – Biotechnology, the core units being worth 96 credit points in total.

<table>
<thead>
<tr>
<th>Group A, Core Units</th>
<th>Year 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit Point</td>
<td>EFTSL</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RMS5110 MOLECULAR GENETICS THEORY</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5120 APPLIED GENETIC ENGINEERING</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5140 BIOPROCESSING TECHNOLOGY PRINCIPLES</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5145 BIOPROCESSING TECHNOLOGY APPLICATIONS</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5130 FUNCTIONAL GENOMICS, &amp; BIOFORMATICS THEORY</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5135 FUNCTIONAL GENOMICS, &amp; BIOINFORMATICS APPLICATIONS</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOGY</strong></td>
<td>12</td>
</tr>
<tr>
<td><strong>RMS5150 ETHICS AND REGULATORY AFFAIRS IN BIOTECHNOLOGY</strong></td>
<td>12</td>
</tr>
</tbody>
</table>
GRADUATE DIPLOMA IN ENVIRONMENTAL MANAGEMENT (I)
Course Code: SGEM

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>Session 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>RCS5111 PRINCIPLES OF ENVIRONMENTAL SCIENCE AND MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5172 SOLID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Session 2

<table>
<thead>
<tr>
<th>Session 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>RCS5100 RESEARCH METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5141 AIR QUALITY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Assessment
Assessment will consist of assignments, field reports, class presentations and end-of-semester examinations.

BACHELOR OF SCIENCE (HONOURS) IN BIOLOGY (BIOTECHNOLOGY) (I)
Course Code: SHBT

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 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>$2,847</td>
<td>$3,559</td>
<td>$6,336</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>RBF4002 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

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 (I)
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

<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>RCS4201 HONOURS COURSEWORK</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td></td>
<td>RCS4601 HONOURS PROJECT PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
</tbody>
</table>
A sound knowledge at an advanced level of the scientific principles underlying the basis of the biotechnology industry and research. Specific aims of the course are to provide students with:

- Problem solving skills
- The skills to use and locate information on problems relating to biotechnology from textbooks, scientific journals and the Internet.
- Excellent oral and written communication skills including discussions on intellectual property, commercialization and ethical considerations.
- 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.

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 NUTRITION AND FOOD SCIENCE (I)**

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 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td>RBFA4001 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>Semester 2</td>
<td>RBFA4002 SCIENCE HONOURS</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
</tbody>
</table>

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) (I)**

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 sound knowledge at an advanced level of the scientific principles underlying the basis of the biotechnology industry and research.
- Problem solving skills
- The skills to use and locate information on problems relating to biotechnology from textbooks, scientific journals and the Internet.
- Excellent oral and written communication skills including discussions on intellectual property, commercialization and ethical considerations.
- 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 will be required to be, on average, at credit level in the undergraduate degree. 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 duration of the course is two years full-time with the option of a part-time equivalent.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Course Code</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>Year 1</td>
<td>RMS5110 MOLECULAR GENETICS THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5120 APPLIED GENETIC ENGINEERING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5140 BIOPROCESSING TECHNOLOGY PRINCIPLES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5145 BIOPROCESSING TECHNOLOGY APPLICATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5130 FUNCTIONAL GENOMICS, &amp; BIOINFORMATICS THEORY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5135 FUNCTIONAL GENOMICS, &amp; BIOINFORMATICS APPLICATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td>Year 1</td>
<td>RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
</tbody>
</table>
Year 2

Elective subjects for Biotechnology Stream
(Group B, Choice of four)

<table>
<thead>
<tr>
<th>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>RMS6130 BIOINFORMATICS I</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS6170 DRUG DESIGN &amp; DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS6135 BIOINFORMATICS II</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS6140 CELL CULTURE AND FERMENTATION TECHNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS6200 PROJECT (BIOTECHNOLOGY)</td>
<td>36</td>
<td>0.3750</td>
<td>2</td>
<td>$2,135</td>
<td>$2,669</td>
<td>$4,752</td>
</tr>
</tbody>
</table>

Core Subjects for Bioinformatics Stream

<table>
<thead>
<tr>
<th>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>RMS6130 BIOINFORMATICS I</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RMS6135 BIOINFORMATICS II</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6607 STATISTICAL COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Other Electives
(Group C, from other schools and faculties)

<table>
<thead>
<tr>
<th>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>RCM5800 OBJECT ORIENTED PROGRAMMING GD1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM6607 STATISTICAL COMPUTING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCM5803 DATA STRUCTURES AND PROGRAMMING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BMO5600 PROJECT MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLO6502 LAW FOR MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLB3129 INTELLECTUAL PROPERTY LAW</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>BH05505 MARKETING MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BEO5304 INTERNATIONAL BUSINESS OPERATIONS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>BLB5500 COMPARATIVE LEGAL SYSTEMS</td>
<td>12</td>
<td>0.1250</td>
<td>3</td>
<td>$833</td>
<td>$1,042</td>
<td>$2,083</td>
</tr>
<tr>
<td>BHO5553 MARKETING RESEARCH</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

MASTER OF SCIENCE IN ENVIRONMENTAL MANAGEMENT (I)

Course Code: SMEM

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.

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 (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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5172 SOLID WASTE MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
</tbody>
</table>

Session 2

<table>
<thead>
<tr>
<th>Session 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>RCS5141 AIR QUALITY MANAGEMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>$712</td>
<td>$890</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>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RCS5100 RESEARCH METHODOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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 (AU$)</th>
<th>From 2005 (AU$)</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCS6000 PROJECT</td>
<td>12</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
</tbody>
</table>

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.

Assessment
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>(a) Core subjects – 128 credit points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6730 PRESERVATION AND PROCESSING TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6750 FOOD SAFETY AND QUALITY ASSURANCE</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6720 FOOD MICROBIOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6710 FOOD ANALYSIS</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RCM6760 RESEARCH PRACTICE, ETHICS AND COMMUNICATION IN FOOD SCIENCE AND TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6920 MAJOR PROJECT 1</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6925 MAJOR PROJECT 2</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6760 CHEMISTRY OF FOODS</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>(b) Elective subjects (commodity) – 48 credit points selected from the following:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6721 FRUIT AND VEGETABLE SCIENCE AND TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6722 GRAIN SCIENCE AND TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6723 MUSCLE FOOD SCIENCE AND TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6724 DAIRY SCIENCE AND TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>(c) Elective subjects (general) – 16 credit points selected from the following or relevant subjects complementary to objective of the course:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBF6910 MINOR PROJECT</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6745 FOOD PRODUCT DEVELOPMENT</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6740 SPECIAL TOPICS IN FOOD TECHNOLOGY</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RBF6930 INDUSTRY TRAINING</td>
<td>12</td>
<td>0.1670</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
</tbody>
</table>
Below are subject details for courses offered by the School of Molecular Sciences in 2007.

**IMPORTANT NOTE:** Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

### 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** 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/labatory 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)** RMB 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.
**Required Reading** Endres, J. 1999, Community Nutrition: Challenges and Opportunities. Columbus, O: Prentice Hall, Inc.

---

**SCHOOL OF MOLECULAR SCIENCES**
FACULTY OF HEALTH, ENGINEERING AND SCIENCE


Class Contact four h per week, comprising of three hours of lecture and one hour of tutorial.

Assessment Assignment (2x2000 words), 20%; Examination (1x1 hrs), 50%; Case study 1, 30%.

RBF2300 MICROBIOLOGY 1
Campus Werribee.
Prerequisite(s) RBF2310 Biology 1.


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, pathogen 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 transport mechanisms; the cell surface; intracellular targeting of proteins including cotranslational and post translational pathways; transport and docking 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 RBF2520 Biochemistry I.

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; genome rearrangements including transposable genetic elements, retroviruses and other mechanisms, genetic rearrangements in the immune system, replication of DNA, telomeres and telomerase, 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.

Required Reading To be advised by the lecturer.

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

Assessment Assignment work, 40%; examination, 60%.

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 of 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, aspects 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.
**RBF3230 ANIMAL FOOD PROCESSING**

**Campus** Werribee

**Prerequisite(s)** Nil.

**Content** World animal food resources: nature, distribution and production. Meat and Meat Products: muscle composition, structure and conversion to meat, post mortem glycolysis and meat quality, nutritional and sensory properties, chilling, freezing, curing and processing. Marine products: composition, structure, quality, spoilage, preservation and processing including chilling, freezing, salting, drying, smoking and fermenting. Milk and Milk Products: composition, chemical and physical properties of milk processing of milk including butter, powdered, fermented and fractionated product manufacture, by-product utilisation. Egg and Poultry Products: structure and composition of egg, storage and preservation of eggs, egg products, poultry processing and poultry products.

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


**Class Contact** Three hours per week comprising lecture and tutorial.

**Assessment** Assignment (2x3000 words), 50%; Exam (1x three h), 50%.

**RBF3235 PLANT FOOD PROCESSING**

**Campus** Werribee

**Prerequisite(s)** Nil.


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


**Class Contact** Three hours per week comprising lecture and tutorial.

**Assessment** Assignment (2x3000 words) 50%; Exam (1x three h), 50%.

**RBF3240 FUNCTIONAL FOODS**

**Campus** Werribee

**Prerequisite(s)** RBM2750 Nutrition

**Content** This subject examines the role and potential of functional ingredients and foods in human nutrition; natural anti-microbial substances in human nutrition; the role of intestinal flora in human health; prebiotics, probiotics, probiotic bacteria and symbiosis.


**Class Contact** Three hours per week comprising lectures/tutorials for one semester.

**Assessment** Assignments, 40%; final examination, 60%.

**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** The aim of this subject is to develop 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.


**Class Contact** Three hours per week for one semester comprising lectures and tutorials.

**Assessment** Assignments 40%, final examination 60%.

**RBF3900 PROJECT**

**Campus** Werribee

**Prerequisite(s)** Students would normally be expected to have successfully completed all Year 1 and 2 subjects.
Content The subject aims to enable students to become competent in applying research methodology to a specific problem and to enable them to develop an area of personal interest relevant to their degree specialisation. This subject covers project methodology, experimental design and analysis, and research plan preparation. The project will be, as far as is possible, concerned with a real problem and will require the presentation of an oral and written report and may form all or part of a research publication. The project will be chosen by the student in consultation with staff members.

Required Reading There are no prescribed texts for this subject.

Class Contact Eight hours per week for one semester comprising lectures, tutorials and practical work.

Assessment A choice of research project will be made halfway through semester five and an assignment concerned with establishing the methodology for this project will be assessed and will contribute 20% to the overall assessment of the project. The written project will contribute 60% and the oral presentation will contribute 20% to the overall assessment.

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. This subject covers: the measurements for analytes in 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 To be advised by lecturers.


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%.

RBF6722 GRAIN SCIENCE AND TECHNOLOGY
Campus Werribee
Prerequisite(s) Eligibility for entry to the Master of Science in Food Science and Technology.

Content This subject will provide students with an understanding of the principles and practices involved in the technology of food cereals and legumes. Topics covered include: Cereal and legumes of the world - nutritional, physical, compositional and biochemical characteristics. The characteristics of grain proteins and starches; protein functionality; the starch granule. The milling of cereals and legumes – cleaning, conditioning, the concept of starch damage and the control of mill product quality. Flour quality, analytical approaches, quality control, grain sprouting and end use suitability. Dough development. The

**Required 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%.

**RBF6723 MUSCLE FOOD SCIENCE AND TECHNOLOGY**

**Campus**
Werribee

**Prerequisite(s)**
Eligibility for entry to the Master of Science in Food Science and Technology.

**Content**
This subject aims to study the physical, chemical and biochemical parameters of muscle foods which have effect on the processing, technology and final quality of the product. The subject covers: The muscle industry; Anatomical microstructure and histochemical characters of muscle; Muscle pigments; Post-mortem biochemistry of muscle; Conversion of muscle to food by processing – slaughtering, chilling, freezing, curing, emulsifying, smoking, fermenting, canning and others. The assessment of product quality. Special religious requirements and the processing of muscle foods to meet these values; By-product processing.

**Required 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%.

**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**
To be advised by lecturers.

**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**
To be advised by lecturers.

**Recommended 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%.

**RBF6740 SPECIAL TOPICS IN FOOD 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 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 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.

**Required Reading**

**Recommended Reading**

**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%.

**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 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.

**Required Reading**
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, micro-biological 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 To be advised by lecturers.
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
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; 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 or Six 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 12 hours per week comprising 1h of tutorial and 3h of practical laboratory work.
Assessment Oral presentation (20 min Power point presentation), 20%; Written report (5000 words), 80%.

RBF6930 INDUSTRY TRAINING
Campus Werribee (the unit will be offered at various food companies).
Prerequisite(s) Successful completion of two semesters of study or equivalent.
Content The unit will be based on a project agreed upon by an industry partner and a supervisor from the School of Molecular Sciences. An example of project will include impact of various types of starter cultures on acidity and resulting shelf life of yoghurt. Such type of project is proposed to be carried out at Nestle Dairy. Another example will include impact of exo-poly saccharide production on sensory properties of dairy foods. This type of project is suited for National Foods.
Required Reading The required reading will depend upon the type and nature of project students are undertaking. The names of text books will be provided depending on the type of work students are doing.
Recommended Reading Students will be required to read relevant websites and concerned company's profile. The web sites will depend upon the nature of the project students will be undertaking. The students will have to read annual report and relevant information of the company.
Class Contact 6 hours per week for 12 weeks for a total of 72 hours, subject to availability and approval by the course co-ordinator.
Assessment Report of approximately 3000 words (80%); based on industry training or a project and an oral presentation (20%).
RBT8001 RESEARCH THESIS – sem 1 (full-time).
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:
RFB8002 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/

RFB8011 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/

RFB8012 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 To be advised by lecturers.
Class Contact Six hours per week comprising 3h of lectures and 3h of tutorials/practicals.
Assessment Assignments, 20% (2 x 10); Practical work, 30%; Final exam (1 x three hrs), 50%.

RCM6811 INFORMATION NETWORKING 1
Prerequisite(s) RCM5805 Communications and Networks or equivalent.
Content Introduction to information networks; communication fundamentals; communication protocols; network architectures; network design; modelling and simulation of networks; network services; network management.
Required Reading To be advised by lecturer.
Class Contact Three hours per week comprising two hours of lectures and one one-hour tutorial.
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.

RCS1000 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%.

RCS1008 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 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.

RCS1110 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%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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
Prerequisite(s) Nil.
Content No formal content; students will be required to provide evidence of 12 months 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 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.

RCS2502 MEDICAL CHEMISTRY 2
Campus Werribee
Prerequisite(s) RCS1601 Chemistry 1A and RCS1603 Medical, Forensic and Analytical Chemistry 1A.
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.
Recommended Reading To be advised by lecturer.
Class Contact Two hours of lectures and three hours of practical classes per week for one semester.
Assessment A combination of assignments, practical work, short tests and a final examination.

RCS2503 FORENSIC CHEMISTRY 2
Campus Werribee
Prerequisite(s) RCS1603 Medical, Forensic & Analytical Chemistry 1A or equivalent.
Content This subject draws upon real life investigations to introduce students to forensic chemical techniques. Modern methods of analysis and materials identification will be studied as applied to crimes against property such as arson, burglary, vehicle accidents and theft; crimes against the person such as assault, sexual offences and murder, and crimes involving the possession, illicit manufacture and distribution of drugs of abuse.
Recommended Reading Students will be directed to relevant sections of Saferstein, 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 A combination of assignments, 15%; practical work, 30%; and examination, 55%.

RCS2521 APPLIED CHEMISTRY 2 – ORGANIC
Campus Werribee
Prerequisite(s) RCS1006 Chemistry 1
Content The aims of this subject are to introduce students to fundamental aspects of synthetic organic chemistry, organic reaction mechanisms along with applications of spectroscopy to organic chemistry. Aromaticity. Electrophilic and nucleophilic aromatic substitution – use in synthesis. Physical, organic chemistry, spectroscopy, including UV, IR, NMR and mass spectroscopy. Chemistry of carbamions – applications in synthesis. The chemistry of free radicals. The chemistry of carbocations. Organic synthesis, particular emphasis will be placed on the relationship of this chemistry to industrial chemistry. Practical exercises providing substantial ‘hands-on’ experience with chromatographic and spectroscopic instrumentation will complement the lecture material.
Class Contact Five hours per week for two semesters, comprising two hours of lectures and three hours of practical work.
Assessment End-of-semester examination, 60%; practical work 20% and two assignments 20%.

RCS2601 ANALYTICAL CHEMISTRY 2A
Campus Werribee
Prerequisite(s) RCS1601 Chemistry 1A, RCS1602 Chemistry 1B or equivalent.
Content Statistics of errors and treatment of analytical data. Sampling of complex materials. Analytical methods based on emission and absorption of radiation including UV visible and fluorescence spectroscopy. Introduction to NMR and mass spectrometry. 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. Students are advised to buy one of the following as a reference of enduring value. Bauer, H.H., Christian, C.D.E. and O'Reilly, J.E., Instrumental Analysis, Allyn and Bacon. Wadsworth.
Class Contact Two per week of lectures and three 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.

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.

Class Contact
Two hours per week of lectures and three 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.

RCS3000 INDUSTRIAL EXPERIENCE 3A

Campus Werribee

Prerequisite(s) Nil

Content
The course aims to provide students with practical laboratory experience, and to introduce them to the range of analytical methods available in the workplace. The course will involve practical work in a laboratory, and the design and execution of experiments related to the analysis of materials.

Required Reading
Recommended by the lecturer.

Assessment
No set contact hours.

RCS3601 ANALYTICAL CHEMISTRY 3A

Campus Werribee

Prerequisite(s) RCS2601 Analytical Chemistry 2A and RCS2602 Analytical Chemistry 2B or equivalent.

Content
The course aims to provide students with a comprehensive understanding of the principles of analytical chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Recommended by the lecturer.

Assessment
No formal content; students will be required to provide evidence of 12 months 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
No set contact hours.

RCS3602 ANALYTICAL CHEMISTRY 3B

Campus Werribee

Prerequisite(s) RCS2601 Analytical Chemistry 2A and RCS2602 Analytical Chemistry 2B or equivalent.

Content
The course aims to provide students with a comprehensive understanding of the principles of analytical chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Recommended by the lecturer.

Assessment
No formal content; students will be required to provide evidence of 12 months 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
No set contact hours.

Class Contact
Two hours per week of lectures 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 3A

Campus Werribee

Prerequisite(s) RCS2502 Medical Chemistry 2.

Content
The course aims to provide students with a comprehensive understanding of the principles of medical chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Current available text book – student to be advised.

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.

RCS3604 MEDICAL CHEMISTRY 3B

Campus Werribee

Prerequisite(s) RCS2502 Medical Chemistry 2.

Content
The course aims to provide students with a comprehensive understanding of the principles of medical chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Recommended by the lecturer.

Assessment
Practical work, 40%; final examination, 60%.

RCS3605 FORENSIC METHODS 3A

Campus Werribee

Prerequisite(s) RCS1603 Medical, Forensic & Analytical Chemistry 1A and RCS2503 Forensic Chemistry 2 or equivalent.

Content
The course aims to provide students with a comprehensive understanding of the principles of forensic chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Recommended by the lecturer.

Assessment
Practical work, 40%; examinations, 60%.

RCS3606 FORENSIC METHODS 3B

Campus Werribee

Prerequisite(s) RCS1603 Medical, Forensic & Analytical Chemistry 1A and RCS2503 Forensic Chemistry 2 or equivalent.

Content
The course aims to provide students with a comprehensive understanding of the principles of forensic chemistry, and to develop their analytical skills through the design and execution of experiments.

Required Reading
Recommended by the lecturer.

Assessment
Practical work, 30%; and examination, 70%.

Recommended Reading Students will be directed to relevant sections of Saferstein, 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 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-renowned 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 30% 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.

RCS4201 HONOURS COURSEWORK
Campus Werribee
Prerequisites Satisfactory completion of an appropriate undergraduate degree program with at least a credit average in the final year.

Content 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.

Required Reading To be advised by the lecturer.

Recommended Reading

Class Contact An average of 10 hours per week.

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.

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.

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
Prerequisites Nil.
Co-requisites Nil.
Recommended Reading Class Contact Three hours of lectures per week for one semester.
Assessment Continuous assessment by assignments, presentations and reports.

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.
Content Atmospheric properties and air pollution. Air pollutant transport at the micro, meso and macro scales. Global climate change as a result of anthropogenic activities. Factors controlling the spread of contaminants in the atmosphere. Effects of air pollution on visibility, weather, climate, vegetation and human health. EPA and SEPP policies and controls; Class 1, 2 and 3 pollutants. Health risk assessment. Computer modelling of air pollution with AU$PLUME. Gaussian plume analysis. Pollutant dispersal from stacks. Odour monitoring and control. Air pollution monitoring and control equipment. Indoor air pollution. Case studies.
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.
Content The concept and history of the Cleaner Production approach. 'End-of-pipe' versus Cleaner Production. Cleaner Production and regulatory authorities. The Cradle-to-Grave concept. Process design and life cycle analysis. Waste minimization and recycling. Environmental auditing, the 'eco-audit'. Worldwide attitudes and approaches to Cleaner Production. Detailed case studies and analysis.
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.
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.

RCS8001 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
is expected that students will be able to:

**Prerequisite(s)**

Campus

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 biological 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.


**Campus Grove**

**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 microtubes, 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 those 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 their effects. Clinical biochemistry and diagnosis of disease. Importance of biochemical tests in the diagnosis of disease. Use of clinical cases to discuss normal and altered human biochemistry. Practical laboratory skills, interpretation of results and the application of good laboratory practice.


**Campus Grove**

**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 three 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 internet 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 databanks will 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 Albans

**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.

**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 pathogen (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.
RMS3060 MICROBIOLOGICAL TECHNOLOGY AND CELL CULTURE

Campus Werribee

Prerequisite(s) RMB220 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 such 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 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 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 Corequisites 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-requisite 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. Structure-function relationships will also be examined in selected proteins from the PDB database, and using programs such as Rasmol, Chimera or Protein Explorer.


Class Contact 36 hours

Assessment Practical exercises and reports (70%); assignment (3000 words, 30%).

RMS5140 BIOPROCESSING 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 (3 h, 70%).

RMS5145 BIOPROCESSING TECHNOLOGY APPLICATIONS

Campus Werribee

Prerequisite(s) or Co-requisite Bioprocessing Technology Principles

Content Laboratory-scale experiments will be conducted that train students in the areas of downstream processing, plant and algal
products, heat-exchange, fermentation, fluid flow, enzyme engineering, biomass conversion and sustainable energy systems.


**Class Contact** Three hours/week of laboratory practicals.

**Assessment** Laboratory reports (100%).

**RMS5150 ETHICS AND REGULATORY AFFAIRS IN BIOTECHNOLOGY**

**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 obligation 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.


**Class Contact** Three hours lectures per week for one semester.

**Assessment** One assignment (3000 words, 50%); final examination (3h, 50%).

**RMS5160 INTELLECTUAL PROPERTY AND COMMERCIALISATION IN BIOTECHNOLOGY**

**Campus Werribee**

**Prerequisite(s)** Nil.

**Content** This unit of study will examine the need for patent protection, patent procedures in Australia, the USA and Europe, and methods of patent searching. Laboratory practicals 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.


**Recommended Reading** S-C. Chow & J-P. Liu, 2003, Design and Analysis of Clinical Trials: Concepts and Methodology, 2nd edn, John Wiley. Websites for the US Food and Drug Administration, the European Agency for the Evaluation of Medicinal Products, and the Australian Therapeutic Goods Administration, and others, will be referred to throughout this unit.

**Class Contact** Three hours per week lectures for one semester.

**Assessment** One assignment (3000 words, 50%); final examination (3h, 50%).

**RMS6135 BIOINFORMATICS II**

**Campus Werribee**

**Prerequisite(s)** or Corequisite(s) Molecular Genetics Theory (RMS5110), Principles of Genomics, Proteomics & Bioinformatics (RMS5130), Applied Genomics, Proteomics & Bioinformatics (RMS5135).

**Content** Topics will include sequence assembly and finishing, large-scale genome analysis, simple and integrated genome and proteome circuits. In addition, examples of how the programming language, Perl, is used for biological analysis will be examined, such as the use of Perl modules and subroutines to find a common ancestor, splice junction recognition and enzyme kinetics.


**Class Contact** 36 hours (3 hours lectures/workshops per week).

**Assessment** Practicals and workshops (50%); tests (1 x 1hr, 20%) and final examination (2 hours, 30%).

**RMS6140 CELL CULTURE AND FERMENTATION TECHNOLOGY**

**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.


**Class Contact** Three hours per week of lectures and/or tutorials with some computer laboratory demonstrations.

**Assessment** Practicals and workshops (30%); assignment (30%) and final examination (3hrs, 40%).

**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.


**Class Contact** Three hours per week for one semester.

**Assessment** One assignment (3000 words, 30%); one test (20%) and final examination (3h, 50%).
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

RMS6145 PROTEIN PRODUCTION, PURIFICATION & ANALYSIS
Campus Werribee
Prerequisites Nil
Content Topics covered in the subject will include protein production in mammalian, bacterial, yeast and insect cell expression systems, protein purification and characterization 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.
Class Contact Three hours a week lectures, tutorials or practicals. Assessment 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, opioid analgesics, etc.; case studies with respect to rational drug design.
Class Contact Two hours lectures and one hour computer laboratory per week for one semester.
Assessment One assignment (3000 words, 20%); one test (I h each, 20% each) and final examination (3h, 60%).

RMS6200 PROJECT (BIOTECHNOLOGY)
Campus Werribee or Off-Campus in Industry
Prerequisites Successful completion of first year and a half (8 core and 4 elective units worth 144 credit points) of the SMBT degree with an average grade of Distinction or higher.
Co-requisites Research Methodology (RMS5100) or equivalent
Learning Outcomes
• To be able to search for, select, read and critically analyse published literature on a particular topic
• To gain competency in formulating a sound experimental proposal
• To be able to independently plan and carry out investigative laboratory experiments
• To gain competency in critical analysis, reporting of results and discussion of these
Content 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 an extended discussion followed by a conclusion. The offering of this Project (Biotechnology) option is unit to availability of suitable projects and supervisors, as well as quality of academic performance of the student in the course to date.
Class Contact This unit will replace three electives in the existing Masters course. There are no contact hours in this unit as it is a Project. A total of 288 hours input will be expected for the unit, consisting of literature searches, proposal writing, laboratory research work and report-writing for the unit.
Assessment A comprehensive, professional-style report including every aspect of the project as described in the Contents including the proposal, experimental methods, results and critical evaluation of results, the length of which shall be in the range of 15,000 to 25,000 words (75%); written appraisal and assessment from the supervisor about the general conduct and performance of the student in the project e.g. application, punctuality, adherence to GLP (Good Laboratory Practice), oral communication skills problem-solving skills and team cooperation (25%).

RNH2110 DISEASE AND HEALTH
Campus Werribee
Prerequisites Nil
Content The unit will study inflammatory and immune responses and pathogenic process of common disorders. Inflammatory and immune 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%.

RNH3210 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)
Prerequisite(s) 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 as 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-calculating 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.


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 analyses: 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).

Assessment Written assignment: 50% Examination: 50%.
• Understands and is able to translate the concept of quality of processes to operational levels, to improve the efficiency and effectiveness of these processes and to be able to control these processes with the most common method.
• Is capable of defining elements of quality of the organisation in terms of ability of an organisation to fulfil the demands of all the stakeholders.
• Is able to apply the different models of quality management and quality improvement (such as EFQM, 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.

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.

RPK6008 PACKAGING STRATEGY DEVELOPMENT AND IMPLEMENTATION
Campus Off shore (NVC, Gouda, the Netherlands)
Prerequisites Being the cap-stone subject it is required that students have studied the subjects of: Development of Packaging Systems, Marketing Research, Costing Methodologies, Investment/Capital Analysis and Budgeting, Quality Assurance and Management, Operational Strategies, Business and Marketing Strategy.
Co-requisites Nil
Learning Outcomes The student:
• Understands that the formulation of a “perception of packaging” is necessary to enable enterprises to use packaging as an effective tool to keep ahead of the competition and deliver value.
• Understands the dynamic interactions within supply chains, i.e. the effects of changes within one link to the remaining links.
• Comprehends the long-term character of packaging development and is able to communicate this to senior management (e.g. the board of directors).
• Can actively convert and apply the most important operational and strategic theories of marketing and operations into packaging elements/features, packaging analysis and packaging policy.
• Recognises, lists, and translates relevant influences from the internal and external (company) environment into packaging aspects and packaging strategies.
• Is capable of independently formulating and propagating an adequate packaging strategy based upon structured analysis.
• Is able to substantiate this strategy both qualitatively and quantitatively.
• Is capable of translating a packaging strategy into budgetary needs, project plan, project- and investment propositions and milestones.
• Can translate the company-, commercial and operational policy to a packaging route.
• Is able to convert status quo and anticipated developments within the industrial column (supply chain) to holistic and linked packaging policies for packer/filler enterprises, distribution enterprises and packaging producing enterprises in the chain.

Content The subject examines existing concepts, theories and opinions on the development and implementation of corporate packaging policies and related strategies. New theories will be explored, discussed and assessed. The subject will focus on the applicability of formerly addressed theories on packaging issues. For instance:
• The direct correlation of packaging strategy with the character and philosophy of the company and target market as well as with the anticipated technological and societal developments.
• Different disciplines of packaging policy.
• The relation of packaging policy to marketing, finance, operations and internal and external environment.
• Case presentations

Hand-outs, cases (to be advised by lecturer).


Class Contact 36 hours, equivalent to 3 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%.

RPK6009 DEVELOPMENT PROJECT/MINOR THESIS (OFFSHORE)

Campus The Netherlands
Prerequisite(s) Nil.

Content To be advised by lecturer.

Required Reading To be advised by lecturer.

Class Contact To be advised by lecturer.

Assessment To be advised by lecturer.
Below are details of undergraduate and postgraduate courses offered by the School of Nursing and Midwifery in 2007. 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 NURSING (DIVISION 2 ENTRY)

**Course Code:** HBDE

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Course Duration</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course Code</th>
<th>Course Objective</th>
<th>Course Duration</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>HNB2132</td>
<td>NURSING THEORY 2: ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB2134</td>
<td>CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB1115</td>
<td>HEALTHCARE LAW AND ETHICS</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3101</td>
<td>RESEARCH FOR PRACTICE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>RBM2541</td>
<td>HUMAN BIO SCIENCE 3 PATHOPHYSIOLOGY</td>
<td>16 0.1670 3</td>
<td>$1,113 $1,392 $2,783</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB2241</td>
<td>NURSING THEORY 4 ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB2234</td>
<td>PRACTICUM 4: ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB2238</td>
<td>NURSING THEORY 5: MENTAL HEALTH &amp; ILLNESS</td>
<td>16 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB2239</td>
<td>CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3236</td>
<td>TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB2237</td>
<td>NURSING THERAPEUTICS: APPLIED MEDICATION MANAGEMENT</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3108</td>
<td>NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3104</td>
<td>CLINICAL PRACTICUM 6: CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3105</td>
<td>NURSING THEORY 7 – ACUTE CARE</td>
<td>12 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3106</td>
<td>CLINICAL PRACTICUM 7: ACUTE CARE</td>
<td>12 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3107</td>
<td>NURSING PRACTICE 6: HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3108</td>
<td>NURSING THEORY 8: (ELECTIVE) ACUTE CARE</td>
<td>12 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3202</td>
<td>NURSING THEORY 8: (ELECTIVE) MENTAL HEALTH &amp; ILLNESS</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3204</td>
<td>NURSING PRACTICE 8: (ELECTIVE) CHILD ADOLESCENT &amp; FAMILY</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3201</td>
<td>NURSING THEORY 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>12 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3252</td>
<td>CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE</td>
<td>16 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3230</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): MENTAL HEALTH &amp; ILLNESS</td>
<td>12 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3248</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>16 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB3249</td>
<td>CLINICAL PRACTICUM 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>12 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>HNB3250</td>
<td>CLINICAL PRACTICUM 9: CONSOLIDATION</td>
<td>16 0.1670 0</td>
<td>$668 $668 $1,910</td>
</tr>
</tbody>
</table>

### BACHELOR OF NURSING (GRADUATE ENTRY) (I)

**Course Code:** HBGN

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>Course Duration</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Course Structure

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course Code</th>
<th>Course Objective</th>
<th>Course Duration</th>
<th>Admission Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>HNB2132</td>
<td>NURSING THEORY 2: ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB2134</td>
<td>CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB2135</td>
<td>NURSING PRACTICE 3: HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>HNB2136</td>
<td>CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>8 0.0830 0</td>
<td>$332 $332 $949</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RBM2541</td>
<td>HUMAN BIO SCIENCE 3 PATHOPHYSIOLOGY</td>
<td>16 0.1670 3</td>
<td>$1,113 $1,392 $2,783</td>
</tr>
<tr>
<td>Semester 2</td>
<td>Year 1</td>
<td></td>
<td>Course Code: HBGN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-----------------</td>
<td>-----------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Credit Point</td>
<td>EFTSL</td>
<td>SC Band</td>
<td>Pre 2005 From</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AUS)</td>
<td>2005 (AU$)</td>
</tr>
<tr>
<td>HNB2241 NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2234 PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2238 NURSING THEORY 5: MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>Year 2</td>
<td>Semester 1</td>
<td>Nursing Theory 8: Electives (Choose one)</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
</tr>
<tr>
<td>HNB3251 NURSING THEORY 8: (ELECTIVE) ACUTE CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</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>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3204 NURSING THEORY 8: (ELECTIVE) CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3201 NURSING THEORY 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>Clinical Practicum 8: Electives (Choose one)</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3252 CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3230 CLINICAL PRACTICUM 8 (ELECTIVE): MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT &amp; FAMILY</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3249 CLINICAL PRACTICUM 8 (ELECTIVE): HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>Consolidation</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
</tbody>
</table>

**BACHELOR OF NURSING (GRADUATE ENTRY) CONTINUING STUDENTS ONLY (I)**

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 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 One</th>
<th>Year 1</th>
<th></th>
<th>Course Code: HBGN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Credit Point</td>
<td>EFTSL</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(AU$)</td>
</tr>
<tr>
<td>HNB2133 NURSING PRACTICE 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
</tr>
<tr>
<td>HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</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>
</tr>
<tr>
<td>HNB2136 CLINICAL PRACTICUM 3: HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
</tr>
<tr>
<td>RBM2517 HUMAN BIOSCIENCE 3</td>
<td>2</td>
<td>0.0830</td>
<td>2</td>
</tr>
<tr>
<td>HNB2137 ETHICS AND LEGAL STUDIES</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
</tr>
</tbody>
</table>
### School of Nursing and Midwifery

### 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).

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>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</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></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB1113</td>
<td>FOUNDATIONS IN PROFESSIONAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$500</td>
<td>$500</td>
<td>$1,429</td>
<td></td>
</tr>
<tr>
<td>HNB1114</td>
<td>HEALTHCARE INFORMATICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>RBM1519</td>
<td>HUMAN BIOSCIENCE 1: BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
<td></td>
</tr>
<tr>
<td>APT1311</td>
<td>PSYCHOLOGY ACROSS THE LIFESPAN</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>HNB1115</td>
<td>HEALTHCARE LAW AND ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB1230</td>
<td>NURSING THEORY 1: ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
<td></td>
</tr>
<tr>
<td>HNB1233</td>
<td>CLINICAL PRACTICUM 1: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>ASE1320</td>
<td>SOCIOLOGY OF INDIGENOUS HEALTH</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB3101</td>
<td>RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>RBM1530</td>
<td>HUMAN BIOSCIENCE 2 BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>Year 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB2132</td>
<td>NURSING THEORY 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2134</td>
<td>CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
<tr>
<td>HNB2136</td>
<td>CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
<td></td>
</tr>
</tbody>
</table>
### Bachelor of Midwifery

**Course Code:** HBNW

#### 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 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
<td></td>
<td>(AUS)</td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM2010 PRACTICE ALLEGIANCES</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</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>
</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>
</tr>
<tr>
<td>HNB2137 ETHICS AND LEGAL STUDIES</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM2020 TOWARDS A MIDWIFE SELF</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>JAC0219 WOMEN'S HEALTH: SOCIOPOLITICAL CONTEXT (CONSORTIUM SUBJECT)</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNM7006 MIDWIVES WORKING WITH DIVERSITY</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$500</td>
<td>$500</td>
</tr>
<tr>
<td>HNB1235 EVIDENCE BASED HEALTH CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td><strong>Year Three</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM3010 NAVIGATING CHILDBEARING OBSTACLES</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNM3011 WOMEN'S HEALTH PRACTICE</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNM7007 CHILDBEARING OBSTACLES</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$325</td>
<td>$325</td>
</tr>
<tr>
<td>JMO3105 WOMEN'S HEALTH: WOMEN'S BUSINESS (CONSORTIUM SUBJECT)</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM3020 WORKING WITH BABIES</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNM3021 INDEPENDENT LEARNING UNIT</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>JAC0335 BABIES NEEDING EXTRA CARE (CONSORTIUM SUBJECT)</td>
<td>0</td>
<td>0.0000</td>
<td>0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>HNM7010 HANGING UP A SHINGLE (MONASH)</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
</tbody>
</table>

### Professional Recognition

Graduates from this program will be eligible for registration with the Nurses Board of Victoria. Graduates may also apply for membership of the Australian College of Midwives Inc.

---

### Bachelor of Midwifery – Continuing Students Only (I)

**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 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
<td></td>
<td>(AUS)</td>
</tr>
<tr>
<td><strong>Semester One</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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>$332</td>
<td>$332</td>
</tr>
<tr>
<td>RBM2541 HUMAN BIOSCIENCE 3 PATHOPHYSIOLOGY</td>
<td>16</td>
<td>0.1670</td>
<td>3</td>
<td>$1,113</td>
<td>$1,392</td>
</tr>
<tr>
<td><strong>Semester Two</strong></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>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2234 PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2238 NURSING THEORY 5: MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td><strong>Year 3</strong></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>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3237 NURSING THERAPEUTICS: APPLIED MEDICATION MANAGEMENT</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3108 NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3115 CLINICAL PRACTICUM 6: CHILD ADOLESCENT AND FAMILY MENTAL HEALTH NURSING</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HNB3105 NURSING THEORY 7 – ACUTE CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3106 CLINICAL PRACTICUM 7: ACUTE CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td><strong>Semester Two</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3107 NURSING PRACTICE 6: HEALTH &amp; ILLNESS IN THE COMMUNITY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3215 NURSING THEORY 8: MENTAL HEALTH NURSING</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB3216 CLINICAL PRACTICUM 8: MENTAL HEALTH NURSING</td>
<td>32</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
</tbody>
</table>

### Bachelor of 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>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Fee Pre 2005 (AU$)</th>
<th>Fee From 2005 (AU$)</th>
<th>Fee Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBM1515</td>
<td>ANATOMY AND PHYSIOLOGY 1</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>APT1310</td>
<td>PSYCHOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>HNM7113</td>
<td>FOUNDATIONS IN MIDWIFERY PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$500</td>
<td>$500</td>
<td>$1,429</td>
</tr>
<tr>
<td>HNM7115</td>
<td>MIDWIFERY STUDIES 1: THE CHILDBEARING JOURNEY</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7114</td>
<td>CONTINUITY OF CARE 1</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM1525</td>
<td>ANATOMY AND PHYSIOLOGY</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HNB1115</td>
<td>HEALTHCARE LAW AND ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7201</td>
<td>MIDWIFERY STUDIES 2: THE CHILDBEARING JOURNEY</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7202</td>
<td>MIDWIFE PRAC 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Year 2

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Fee Pre 2005 (AU$)</th>
<th>Fee From 2005 (AU$)</th>
<th>Fee Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASE1320</td>
<td>SOCIOLOGY OF INDIGENOUS HEALTH</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>RBM2528</td>
<td>PATHOPHYSIOLOGY IN MIDWIFERY</td>
<td>12</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>HNM7203</td>
<td>MIDWIFERY STUDIES 3: CHILDBEARING COMPLICATIONS</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7204</td>
<td>MIDWIFERY PRACTICE 3: CHILDBEARING COMPLICATIONS</td>
<td>12</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$2,859</td>
</tr>
<tr>
<td>Semester Four</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNB3101</td>
<td>RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7205</td>
<td>MIDWIVES WRKG WITH WOMEN FROM DIV BCKGRD</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7206</td>
<td>MIDWIFE PRAC 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7207</td>
<td>MIDWIFIERY PRACTICE 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7208</td>
<td>CONTINUITY OF CARE TWO</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
</tbody>
</table>

Year 3

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Fee Pre 2005 (AU$)</th>
<th>Fee From 2005 (AU$)</th>
<th>Fee Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HNB7309</td>
<td>APPLIED MEDICATION MANAGEMENT</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7310</td>
<td>MIDWIFERY STUDIES 5 CHILDBEARING COMPLIC</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7311</td>
<td>MIDWIFE PRAC 5 CHILDBEARING COMPLICATION</td>
<td>12</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$2,859</td>
</tr>
<tr>
<td>HNM7312</td>
<td>CONTINUITY OF CARE THREE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>Semester Six</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HNM7313</td>
<td>MIDWIFERY STUD 6 BABIES NEED EXTRA CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
<td>$949</td>
</tr>
<tr>
<td>HNM7314</td>
<td>MIDWIFE PRAC 6 BABIES NEED EXTRA CARE</td>
<td>12</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM7315</td>
<td>MIDWIFERY PRACTICE 7 CONSOLIDATION</td>
<td>12</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$2,859</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) (I)

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.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

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 possess 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>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>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBUN113 FOUNDATIONS IN PROFESSIONAL PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>0</td>
<td>$500</td>
<td>$500</td>
</tr>
<tr>
<td>HBUN114 HEALTHCARE INFORMATICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>RBM1519 HUMAN BIOSCIENCE 1: BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
</tr>
<tr>
<td>APT1311 PSYCHOLOGY ACROSS THE LIFESPAN</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td>HBUN1115 HEALTHCARE LAW AND ETHICS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>Semester Two</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBUN1230 NURSING THEORY 1: ACUTE CARE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
</tr>
<tr>
<td>HBUN1233 CLINICAL PRACTICUM 1: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>ASE1320 SOCIOLOGY OF INDIGENOUS HEALTH</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN3101 RESEARCH FOR PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>RBM1530 HUMAN BIOSCIENCE 2 BODY STRUCTURE &amp; FUNCTION</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</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 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBUN2241 NURSING THEORY 4 ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2234 PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2238 NURSING THEORY 5: MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>3</td>
<td>$1,113</td>
<td>$1,392</td>
</tr>
<tr>
<td>HBUN2239 CLINICAL PRACTICUM 5 MENTAL HEALTH &amp; ILLNESS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</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>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBUN3236 TRANSITION TO PROFESSIONAL PRACTICE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2237 NURSING THERAPEUTICS: APPLIED MEDICATION MANAGEMENT</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN3108 NURSING THEORY 6 CHILD ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN3104 CLINICAL PRACTICUM 6: CHILD, ADOLESCENT &amp; FAMILY</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN3105 NURSING THEORY 7 – ACUTE CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN3106 CLINICAL PRACTICUM 7: ACUTE CARE</td>
<td>12</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
</tbody>
</table>

| Semester Two               |              |       |         |                   |          |
| HBUN3107 NURSING PRACTICE 6: HEALTH & ILLNESS IN THE COMMUNITY | 8           | 0.0830 | 0       | $332              | $332     | $949   |
| HBUN3251 NURSING THEORY 8: (ELECTIVE) ACUTE CARE | 12          | 0.0830 | 0       | $332              | $332     | $949   |
| HBUN3202 NURSING THEORY 8: (ELECTIVE) MENTAL HEALTH & ILLNESS | 8           | 0.0830 | 0       | $332              | $332     | $949   |
| HBUN3204 NURSING THEORY 8: (ELECTIVE) CHILD ADOLESCENT & FAMILY | 8           | 0.0830 | 0       | $332              | $332     | $949   |
| HBUN3201 NURSING THEORY 8 (ELECTIVE): HEALTH & ILLNESS IN OLDER ADULTS | 12          | 0.0830 | 0       | $332              | $332     | $949   |
| Clinical Practicum 8: Electives (Choose one) | 16          | 0.1670 | 0       | $668              | $668     | $1,910 |
| HBUN3252 CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE | 16          | 0.1670 | 0       | $668              | $668     | $1,910 |
| HBUN3230 CLINICAL PRACTICUM 8 (ELECTIVE): MENTAL HEALTH & ILLNESS | 12          | 0.1670 | 0       | $668              | $668     | $1,910 |
| HBUN3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY | 16          | 0.1670 | 0       | $668              | $668     | $1,910 |
| HBUN3249 CLINICAL PRACTICUM 8 (ELECTIVE): HEALTH & ILLNESS IN OLDER ADULTS | 12          | 0.1670 | 0       | $668              | $668     | $1,910 |

| Consolidation              |              |       |         |                   |          |
| HBUN3250 CLINICAL PRACTICUM 9: CONSOLIDATION | 16          | 0.1670 | 0       | $668              | $668     | $1,910 |

BACHELOR OF NURSING (PRE-REGISTRATION) – CONTINUING STUDENTS ONLY

Course Code: HBUN

<table>
<thead>
<tr>
<th>Year Two</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>(Continuing Students Only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBUN2133 NURSING PRACTICE 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2135 NURSING PRACTICE 3: HEALTH &amp; ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HBUN2136 CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
</tbody>
</table>
### School of Nursing and Midwifery

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

Absence from clinical placement may affect a student's ability to demonstrate an acceptable level of competency. Students will be rated as 'incomplete' if clinical practice evidence for their absence can be provided. Further clinical learning and assessment may be offered to replace the days 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)

#### Semester One

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</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></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>HNB2133 NURSING PRACTICE 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</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>$332</td>
<td>$332</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>$332</td>
<td>$332</td>
</tr>
<tr>
<td>RBM2517 HUMAN BIOSCIENCE 3</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
</tr>
<tr>
<td>HNB2137 ETHICS AND LEGAL STUDIES</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
</tbody>
</table>

#### Semester Two

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credit Points</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></td>
<td></td>
<td></td>
<td>(AU$)</td>
<td>(AU$)</td>
</tr>
<tr>
<td>HNB2233 NURSING PRACTICE 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2234 PRACTICUM 4: ACUTE CARE</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2235 NURSING PRACTICE MENTAL HEALTH &amp; ILLNESS</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>HNB2236 CLINICAL PRACTICUM 5 MENTAL HEALTH AND ILL</td>
<td>8</td>
<td>0.0830</td>
<td>0</td>
<td>$332</td>
<td>$332</td>
</tr>
<tr>
<td>RBM2527 HUMAN BIOSCIENCE 4</td>
<td>8</td>
<td>0.0830</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee

(HAU$) (AU$) (AU$) (AU$)

HNB2237 NURSING THERAPEUTICS: APPLIED MEDICATION MANAGEMENT
Semester Three
8 0.0830 0 $332 $332 $949

HNB3236 TRANSITION TO PROFESSIONAL PRACTICE
8 0.0830 0 $332 $332 $949

HNB3101 RESEARCH FOR PRACTICE
8 0.0830 0 $332 $332 $949

HNB3136 NURSING PRACTICE 7: MENTAL HLTH AND ILLNESS
8 0.0830 0 $332 $332 $949

HNB3103 NURSING PRACTICE 6: CHILD, ADOLESCENT & FAMILY
8 0.0830 0 $332 $332 $949

HNB3104 CLINICAL PRACTICUM 6: CHILD, ADOLESCENT & FAMILY
8 0.0830 0 $332 $332 $949

Semester Four
HNB3107 NURSING PRACTICE 6: HEALTH & ILLNESS IN THE COMMUNITY
8 0.0830 0 $332 $332 $949

Nursing Practice 8: Electives
HNB3271 NURSING PRACTICE 8 ACUTE CARE
8 0.0830 0 $332 $332 $949

HNB3272 NURSING PRACTICE 8 MENTAL HEALTH & ILLNESS
8 0.0830 0 $332 $332 $949

HNB3247 NURSING PRACTICE 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY
8 0.0830 0 $332 $332 $949

HNB3273 NURSING PRACTICE 8 HEALTH & ILLNESS IN OLDER ADULTS
8 0.0830 0 $332 $332 $949

Clinical Practicum 8: Electives
HNB3274 CLINICAL PRACTICUM 8 ACUTE CARE
16 0.1670 0 $668 $668 $1,910

HNB3275 CLINICAL PRACTICUM 8 MENTAL HEALTH & ILLNESS
16 0.1670 0 $668 $668 $1,910

HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY
16 0.1670 0 $668 $668 $1,910

HNB3276 CLINICAL PRACTICUM 8 HEALTH & ILLNESS OLDER ADULTS
16 0.1670 0 $668 $668 $1,910

Consolidation
HNB3250 CLINICAL PRACTICUM 9: CONSOLIDATION
16 0.1670 0 $668 $668 $1,910

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.

GRADUATE DIPLOMA IN SUBSTANCE ABUSE STUDIES (I)
Course Code: HGSA

Course Objectives
The aim of the course is to provide students with a broad understanding of theories, treatment methods, health promotion skills and therapeutic intervention techniques that would allow them to make a positive contribution in the area of substance abuse through appropriate direct intervention and referral.

The course is designed to be both a useful stand alone qualification and to articulate with several other graduate courses offered within the University.

Admission Requirements
This course is a multi-disciplinary program and is open to all health care professionals or individuals working in the area of substance abuse. To qualify for admission to the course applicants must normally hold a bachelor degree. Applicants who do not meet the normal admission requirement, but who possess appropriate professional experience and meet such other requirements as are perceived appropriate by the School, may be considered. These requirements may include the completion of selected nursing and/or other subjects from the undergraduate degree program, or a preparation for study program. Applicants may be required to attend an interview and would need to demonstrate to an academic panel adequate preparation to undertake studies at a higher level.

Course Duration
The course is offered over one year on a full time basis or part time equivalent, depending on demand.

Course Structure
The part time structure is as follows:

Year One
Semester One
HNMS134 ADVANCED CLINICAL & HEALTH ASSESSMENT (SUBSTANCE ABUSE STUDIES) 16 0.1670 0 $668 $668 $1,910
HNMS114 SUBSTANCE ABUSE STUDIES 1 16 0.1670 0 $668 $668 $1,910
HNMS124 SUBSTANCE ABUSE STUDIES 2 16 0.1670 0 $668 $668 $1,910
SCHOOL OF NURSING AND MIDWIFERY

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee
Semester Two (AU$) (AU$) (AU$)

HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS 16 0.1670 0 $668 $668 $1,910
HNM5204 SUBSTANCE ABUSE CLINICAL INTERNSHIP 16 0.1670 0 $668 $668 $1,910
HNM5214 ADVANCED CLINICAL MEDICATION MANAGEMENT (SUBSTANCE ABUSE STUDIES) 16 0.1670 0 $668 $668 $1,910

TOTAL POINTS FOR EXIT AT GRADUATE DIPLOMA LEVEL = 96 Credit Points, 216 Hours

BACHELOR OF NURSING (HONOURS)
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.

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee
Semester One (AU$) (AU$) (AU$)

HNN4101 INQUIRY INTO NURSING KNOWLEDGE 16 0.1670 0 $668 $668 $1,910
HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS 16 0.1670 0 $668 $668 $1,910
HNN4102 ADVANCED QUANTITATIVE RESEARCH METHODS 16 0.1670 0 $668 $668 $1,910
OR
HNN4103 ADVANCED QUALITATIVE RESEARCH METHODS 16 0.1670 0 $668 $668 $1,910

Semester Two

HNN4200 MINOR THESIS (FULL TIME) 48 0.5000 0 $1,999 $1,999 $5,718
HNN4201 MINOR THESIS (PART TIME) 24 0.2500 0 $1,000 $1,000 $2,859
HNN4201 Minor Thesis (Part Time) x 2 (Total 48 credit points, 72 hours)

BACHELOR OF HEALTH SCIENCE (HONOURS) – NURSING CONTINUING STUDENTS ONLY (I)
Course Code: HHNU

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>Course Code</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>HNH4312 MINOR THESIS A</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNH4314 MINOR THESIS B (FULL TIME)</td>
<td>0.5000</td>
<td>0</td>
<td>$1,999</td>
<td>$1,999</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNH4313 MINOR THESIS B (PART TIME)</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$2,859</td>
</tr>
<tr>
<td>HFR0001 ADVANCED QUANTITATIVE RESEARCH METHODS</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
<tr>
<td>HFR0002 ADVANCED QUALITATIVE RESEARCH METHODS</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
</tbody>
</table>

**MASTER OF HEALTH SCIENCE - DIABETES EDUCATION AND MANAGEMENT**

Course code: HMDE

Course Objectives

On completion of the course, the participants should be able to:
- practice at an advanced practice level in providing education and counselling to people with Diabetes Mellitus;
- provide clinical expertise and leadership for the care and management of people with Diabetes;
- engage in research and evidence based practice activities within the chosen area of treatment and care.

Course Duration

The Master programs (coursework stream and minor thesis stream) are offered over 3 semesters full time or part time equivalent. Upon completion of two semesters (full time study) students may exit with the Graduate Diploma in Diabetes Education and Management. The third and final semester of study completes the articulated sequence of study leading to the Master of Health Science (Diabetes Education and Management).

Admission Requirements

To qualify for admission students will require a Degree in Nursing or another Health-related discipline; e.g. Podiatry, or Dietetics. Applicants must also have relevant professional experience, as approved by the School of Nursing & Midwifery. International applicants must provide evidence of IELTS 7.0.

Course Structure

Graduate Diploma in Diabetes Education and Management

<table>
<thead>
<tr>
<th>Course Code</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>HNM5111 ADVANCED CLINICAL &amp; HEALTH ASSESSMENT (DIABETES EDUCATION AND MANAGEMENT)</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5121 DIABETES DISEASE PROCESSES AND TREATMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5131 DIABETES EDUCATION AND CLINICAL MANAGEMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course Code</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>HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5201 DIABETES CLINICAL INTERNSHIP</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5211 ADVANCED CLINICAL MEDICATION MANAGEMENT (DIABETES EDUCATION AND MANAGEMENT)</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

Total for Exit at Graduate Diploma Level = 96 credit points, 216 hours

EXIT POINT FOR GRADUATE DIPLOMA IN DIABETES EDUCATION AND MANAGEMENT

Master of Health Science (Diabetes Education and Management)

Coursework Stream

Year 1

<table>
<thead>
<tr>
<th>Course Code</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>HNM5111 ADVANCED CLINICAL &amp; HEALTH ASSESSMENT (DIABETES EDUCATION AND MANAGEMENT)</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5121 DIABETES DISEASE PROCESSES AND TREATMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5131 DIABETES EDUCATION AND CLINICAL MANAGEMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

Semester 2

<table>
<thead>
<tr>
<th>Course Code</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>HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5201 DIABETES CLINICAL INTERNSHIP</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5211 ADVANCED CLINICAL MEDICATION MANAGEMENT (DIABETES EDUCATION AND MANAGEMENT)</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
</tbody>
</table>

Total for Master of Health Science (Diabetes Education and Management) = 144 credit points, 324 hours

EXIT POINT FOR MASTER OF HEALTH SCIENCE (DIABETES EDUCATION AND MANAGEMENT)

Minor Thesis Stream

Year 1

<table>
<thead>
<tr>
<th>Course Code</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>HNM5111 ADVANCED CLINICAL &amp; HEALTH ASSESSMENT (DIABETES EDUCATION AND MANAGEMENT)</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5121 DIABETES DISEASE PROCESSES AND TREATMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM5131 DIABETES EDUCATION AND CLINICAL MANAGEMENT</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
</tbody>
</table>
### Master of Nursing

**Course Code:** HMPN

Incorporating -
- Cancer Nursing
- Emergency Nursing
- Gerontic Nursing
- Neuroscience Nursing
- Orthopaedic Nursing
- Paediatric Nursing
- Nursing Management

**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.

**Course Structure**
The Program provides for multiple entry and exit points. Upon completion of the first semester of study students may exit with the Graduate Certificate in their chosen area of specialisation. Upon completion of the second semester of study students may exit with the Graduate Diploma in their chosen area of specialisation. The third and final semester of study completes the articulated sequence of study leading to the Master of Nursing.

#### Master of Nursing (Full Time/Part Time)

<table>
<thead>
<tr>
<th>Core Units of Study</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>HNG5001 ISSUES AND POLICIES IN PROFESSIONAL PRACTICE</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM6118 EVIDENCE BASED PRACTICE IN SPECIALISED NURSING</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM6119 LEADERSHIP AND MANAGEMENT IN SPECIALISED NURSING</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>HNM6029 CLINICAL SPECIALISED PROJECT</td>
<td>32</td>
<td>0.3330</td>
<td>0</td>
<td>$1,331</td>
<td>$1,331</td>
<td>$3,808</td>
</tr>
<tr>
<td>HHA6115 MINOR THESIS (FULL TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>0</td>
<td>$1,999</td>
<td>$1,999</td>
<td>$5,718</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHA6116 MINOR THESIS (PART TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$2,859</td>
</tr>
<tr>
<td>Minor Thesis Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFR0001 ADVANCED QUANTITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
<tr>
<td>HFR0002 ADVANCED QUALITATIVE RESEARCH METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>1</td>
<td>$668</td>
<td>$834</td>
<td>$1,911</td>
</tr>
</tbody>
</table>
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Specialisations – Level 3
HNO5003 ORTHOPAEDIC NURSING STUDIES 3 16 0.1670 0 $668 $668 $1,910
HNP5003 PAEDIATRIC NURSING STUDIES 3 16 0.1670 0 $668 $668 $1,910
HNM5006 NURSING MANAGEMENT 3 16 0.1670 0 $668 $668 $1,910

EXIT WITH MASTER OF NURSING

MASTER OF NURSING (SPECIALISATIONS)
Course Code: HMSN

Incorporating -
Graduate Certificates and Graduate Diplomas in
• Orthopaedic Nursing
• Paediatric Nursing
• Medical/Surgical 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.

Course Structure
The Program provides for multiple entry and exit points. Upon completion of the first semester of study students may exit with the Graduate Certificate in their chosen area of specialisation. Upon completion of the second semester of study students may exit with the Graduate Diploma in their chosen area of specialisation. The third and final semester of study completes the articulated sequence of study leading to the Master of Nursing.

Credit Point EFTSL SC Band Pre 2005 From 2005 Full Fee
(AUS) (AUS) (AUS)

Master of Nursing (Specialisation) (Full Time)
Year 1 Semester One
HNM5105 ADVANCED CLINICAL & HEALTH ASSESSMENT
(NURSING SPECIALISATIONS) 16 0.1670 0 $668 $668 $1,910
Clinical Studies 1 16 credit points 36 hours
Clinical Studies 2 16 credit points 36 hours
Exit Graduate Certificate in Nursing (Specialisation)
Subtotal 48 credit points 108 hours

Year 1 Semester Two
HNR0001 INTRODUCTION TO RESEARCH DESIGN AND METHODS 16 0.1670 0 $668 $668 $1,910
HNM5215 ADVANCED CLINICAL MEDICATION MANAGEMENT
(NURSING SPECIALISATIONS) 16 0.1670 0 $668 $668 $1,910
Clinical Studies (Clinical Internship) 3 16 credit points 36 hours
Exit Graduate Diploma in Nursing (Specialisation)
Subtotal 48 credit points 108 hours
Total for Graduate Diploma in Nursing 96 credits 216 hours

Coursework Stream
Year 2 Semester 1
HNM6200 HEALTH PROMOTION 16 0.1670 0 $668 $668 $1,910
HNM6125 SPECIALISATION CLINICAL PROJECT (FULL TIME) 32 0.3330 0 $1,331 $1,331 $3,808
Exit Master of Nursing (Specialisation) Subtotal 48 credit points 108 hours
OR

Minor Thesis Stream Year 2 Semester 1
HHA6115 MINOR THESIS (FULL TIME) 48 0.5000 0 $1,999 $1,999 $5,718
Exit Master of Nursing (Specialisation) Subtotal 48 credit points 108 hours
Total for Master of Nursing (Specialisation) 144 credit points 324 hours
## School of Nursing and Midwifery

### Master of Nursing (Specialisation) (Part Time)

*(Not available for International students)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</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>1</td>
<td></td>
<td>HNM5105</td>
<td>ADVANCED CLINICAL &amp; HEALTH ASSESSMENT (NURSING SPECIALISATIONS)</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Clinical Studies 1</td>
<td>16 credit points</td>
<td>36 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td></td>
<td>Clinical Studies 2</td>
<td>16 credit points</td>
<td>36 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exit Graduate Certificate in Nursing (Specialisation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for Graduate Certificate in Nursing (Specialisation)</td>
<td>48 credit points</td>
<td>108 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>HNM5215</td>
<td>ADVANCED CLINICAL MEDICATION MANAGEMENT (NURSING SPECIALISATIONS)</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>HNR0001</td>
<td>INTRODUCTION TO RESEARCH DESIGN AND METHODS</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Clinical Studies 3 (Clinical Internship)</td>
<td>16 credit points</td>
<td>36 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exit Graduate Diploma in Nursing (Specialisation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subtotal for Graduate Diploma in Nursing (Specialisation)</td>
<td>48 credit points</td>
<td>108 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for Graduate Diploma in Nursing (Specialisation)</td>
<td>96 credit points</td>
<td>216 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Coursework Stream

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</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>3</td>
<td>1</td>
<td>HNM6200</td>
<td>HEALTH PROMOTION</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>HNM6135</td>
<td>SPECIALISATION CLINICAL PROJECT (PART TIME)</td>
<td>16</td>
<td>0.1670</td>
<td>0</td>
<td>$668</td>
<td>$668</td>
<td>$1,910</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Minor Thesis Stream</td>
<td>Year 3 Semester</td>
<td>HHA6116</td>
<td>MINOR THESIS (PART TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2 x 48 credit points</td>
<td>108 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exit Master of Nursing (Specialisation)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subtotal for Master of Nursing (Specialisation)</td>
<td>48 credit points</td>
<td>108 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total for Master of Nursing (Specialisation)</td>
<td>144 credit points</td>
<td>324 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Students who exit at Graduate Diploma level will not be permitted to re-enrol into the Masters level within a (2) two year period after graduation. Students are required to reapply for entry at the Masters level. Acceptance to the course is at the discretion of the School of Nursing and Midwifery upon approval from the admission committee.

### DOCTOR OF PHILOSOPHY (I)

**Course Code:** HPNU

The School of Nursing and Midwifery offers PhD research supervision in the following areas:
- Acute Care
- Mental Health
- Public Health
- Family Health
- Ontology and Epistemology of Caring
- Human Health and Illness experiences

Students who have areas of interest in nursing other than those listed are nevertheless encouraged to discuss enrolment possibilities with the School, which can facilitate co-supervisory links with other schools or institutions.

### Admission Requirements

To qualify for admission to the Doctor of Philosophy applicants must have:
- a Master degree; or
- a four-year undergraduate degree with honours normally at upper second class level (H2A) or equivalent;
- exceptional related research experience.

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 Doctor of Philosophy students must undertake an appropriate research design subject, or any other subject as required by the School, have their candidature approved by the University and present their proposal to an appropriate research committee; and successfully complete a thesis undertaken with appropriate supervision. Students must receive a satisfactory progress report each semester.

### MASTER OF NURSING (BY RESEARCH) (I)

**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;
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- 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>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>HNM6800RESEARCH THESIS (FULL TIME)</td>
<td>48</td>
<td>0.5000</td>
<td>0</td>
<td>$1,999</td>
<td>$5,718</td>
</tr>
<tr>
<td>HNM6801RESEARCH THESIS (PART TIME)</td>
<td>24</td>
<td>0.2500</td>
<td>0</td>
<td>$1,000</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.

NON AWARD SHORT COURSE: PRE-REGISTRATION COURSE FOR OVERSEAS QUALIFIED AND RE-ENTRY NURSES (I)
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
Credit Points
HNN001: The Australian health care system 16 hours
HNN002: Nursing within the Australian health care system 16 hours
HNN003: Pharmacology 12 hours
HNN004: Nursing principles, process and practice 80 hours (14 hours of clinical laboratories on Campus)
HNN005: Communication processes 20 hours
HNN006: Clinical Practice (Supervised clinical practice) 256 hours

BRIDGING COURSE (GRADUATE ENTRY) (I)
Course Code: HSGN

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 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.

Course Structure

<table>
<thead>
<tr>
<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>APP1021 DEVELOPMENT PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
</tr>
<tr>
<td>RBM1536</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BRIDGING COURSE (DIVISION 2 ENTRY) (I)
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>Course Code</th>
<th>Course Name</th>
<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>HSD1114</td>
<td>DEVELOPMENT PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP1021</td>
<td>DEVELOPMENT PSYCHOLOGY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM1536</td>
<td>DEVELOPMENT PSYCHOLOGY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUBJECTS
Below are subject details for courses offered by the School of Nursing and Midwifery in 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University's searchable online courses database at www.vu.edu.au/courses

HFR0001 ADVANCED QUANTITATIVE RESEARCH METHODS
Campus Footscray, St Albans, City Flinders Lane (as per student enrolment)
Prerequisite(s) One of HER0001 Introduction to Research Design and Methods, HHR0001 Introduction to Research Design and Methods, HNR0001 Introduction to Research Design and Methods, HPR0001 Introduction to Research Design and Methods or equivalent.
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 SPSSx computer package, however, the focus of the course will be on statistical analyses as a part of the total research process.

Subject Hours Two hour seminar and one hour tutorial per week for one semester.
Assessment Research proposal or critique (50%); data analysis project (50%).

HFR0002 ADVANCED QUALITATIVE RESEARCH METHODS
Campus Footscray, St Albans, City Flinders Lane
Prerequisite(s) HER0001 Introduction to Research Design and Methods, HHR0001 Introduction to Research Design and Methods; HNR0001 Introduction to Research Design and Methods; HPR0001 Introduction to Research Design and Methods or equivalent.
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 eg ethnography, grounded theory, phenomenology, poststructural/critical research, action research, case studies etc. Technique and procedures of advanced skills in data collection including participant and non-participant observational strategies, individual and group interviewing techniques, and unobtrusive strategies such as document analysis. Techniques for qualitative data analysis include using computers in qualitative data analysis. Credibility and trustworthiness issues, ethical issues, and writing up of qualitative research will be discussed.

Subject Hours 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%).

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.


Class Contact This subject will be conducted over one or two semesters depending on mode. Appropriate consultation time with the supervisor will be organized before each semester begins in which a learning contract that includes aims and objectives and time frame of the research project will be provided to each student.

Assessment It comprises a document that will account for 100% of the subject grade with a word count and presentation format that will depend on both the discipline and the subject matter. Word limits and scope of the research project should reflect the current guidelines in the Faculty's handbook. It should not exceed 20,000 words.

The thesis will be graded using the post graduate subject grading system by two examiners.

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 to be noted that the topic chosen for investigation will be in consultation with an appropriate supervisor who will oversee the conduct of the research.


Class Contact This subject will be conducted over one or two semesters depending on mode. Appropriate consultation time with the supervisor will be organized before each semester begins in which a learning contract that includes aims and objectives and time frame of the research project will be provided to each student.

Assessment It comprises a document that will account for 100% of the subject grade with a word count and presentation format that will depend on both the discipline and the subject matter. Word limits and scope of the research project should reflect the current guidelines in the Faculty's handbook. It should not exceed 20,000 words. The thesis will be graded using the post graduate subject grading system by two examiners.

HNF1124 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.


Subject Hours 39 hours comprising lectures, tutorials, and class participations.

Assessment Seminar presentation and written assignment, 30%; assignment 70%.

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.

HNB1113 FOUNDATIONS IN PROFESSIONAL PRACTICE

Campus St Albans

Prerequisite(s) Nil

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 history health 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. Arrangements (including Articulation Pathways) if applicable.


**Subject Hours** Equivalent of 60 hours.

**Assessment** 1½ hours for Examination 40%, evaluation of health assessment skills and clinical reasoning 40%, annotated bibliography on professional issues 20%.

**HN3114 HEALTHCARE INFORMATICS**

**Prerequisite(s)** Nil.

**Content** 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. The use of technology in the remote and rural areas through the use of tele-health technology and the nurses' participation and role in this area. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

**Required Reading**


**Recommended Reading**


**Subject Hours** Equivalent of 40 hours.

**Assessment** Written assignment (1500 words) – 40%, annotated bibliography – including search strategies used – 40%, on-line participation in discussion groups 20%.

**HN1115 HEALTHCARE LAW AND ETHICS**

**Campus St Albans**

**Prerequisite(s)** Nil.

**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. In 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.


**Recommended Reading**


**Subject Hours** Equivalent of 56 hours

**Assessment** Learning folio – 60%, oral presentation – 40%.

---

### HNB1135 PROFESSIONAL NURSING 1

**Campus** St Albans

**Prerequisite(s)** Nil.

**Content** An introduction to the Australian Nursing Council Incorporated (ANCI) Competencies, historical and contemporary influences on the development of the profession in Australia and New Zealand, professional code of conduct, professional boundaries, and structures within the profession that influence the practice of the profession.

**Required Reading**


**Recommended Reading**


**Required Reading**


**Subject Hours** Equivalent of 56 hours

**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 and documentation; 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 performance of holistic assessment of one client, as demonstrated by case planning and documentation; 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. Final assessment: Satisfactory/Unsatisfactory.

---

### HNB1234 PROFESSIONAL NURSING 2

**Campus** St Albans

**Prerequisite(s)** HNB1135 Professional Nursing 1

**Content** This subject aims to introduce students to professional issues in acute care nursing including communication processes as well as funding initiatives and mechanisms that impact on the nursing care of acutely ill patients.

**Required Reading**


**Subject Hours** Equivalent of 40 hours organised according to teaching mode used.

**Assessment** Critical observation exercise/discussion (50%). A clinical examination (50%).

---

### HNB1235 EVIDENCE BASED HEALTH CARE

**For continuing students only**

**Campus** St Albans

**Prerequisite(s)** Nil.

**Content** The aim of this subject is to introduce the student to the literature and research that supports evidence based professional practice in nursing and midwifery, the skills that are needed to understand and appraise a systematic review of research literature, and the methods that are used to determine the quality, reliability and relevance of the research studies. Further, the students' knowledge base required for providing nursing care to patients who need assistance in meeting basic human needs within an acute care setting. Knowledge for beginning understanding of the psychosocial dimensions of the health of individuals and families will be introduced. The focus of the subject is the practice of fundamental nursing skills, family health, mental health, the scientific basis for nursing practice, and nursing care that meets the special needs of the adult and the older person experiencing compromised health and wellness. The students will build understanding of knowledge and skills previously learned. An integrated approach will be used with links to bioscience, psychology, sociology and related nursing subjects.

---
and meta-analysis, and the approaches that can be used to implement research based practice. The focus will be on how to appraise and use research in clinical practice.

**Required Reading**


**Recommended Reading**


**Subject Hours** Equivalent of 32 hours organised according to teaching methods used.

**Assessment**

Devise and conduct a systematic literature search strategy (not review) on a nominated clinical topic 50%; Appraisal of a systematic review or research paper on the nominated clinical topic 50%.

**HNB2132 NURSING THEORY 2: ACUTE CARE**

**Campus St Albans**

**Prerequisite(s)** Nursing Practice 1; Human Bioscience 2; Body Structure and Function.

**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.

**Required Reading**


**Recommended Reading**


**HNB2133 NURSING PRACTICE 2: ACUTE CARE**

**Campus St Albans**

**Prerequisite(s)** Nursing Practice 1; Human Bioscience 2; Body Structure and Function.

**Co-requisites**

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.

**Required Reading**


**Recommended Reading**


Recommended Journals

Recommended Websites
• Department of Human Services, Victorian State Government: http://www.dhs.vic.gov.au
• Australian Resuscitation Council: http://www.resus.org.au/
• Asthma Victoria: http://www.asthma.org.au/index.html
• Asthma Australia: http://www.asthmaaustralia.org.au/
• The Cancer Council: http://www.accv.org.au
• National Breast Cancer Centre: http://www.nbcc.org.au/
• Papscreen Victoria: http://www.papscreen.org/
• Diabetes Australia: http://www.diabetesaustralia.com.au
• International Diabetes Institute: http://www.idi.org.au/home.htm
• Virtual Hospital: http://www.vh.org/

Class Contact
Equivalent of 40 hours.

Assessment
Problem based learning (PBL) group exercise – 30%, 1 1/2 hour Examination – 40%, case study related literature review – 30%, Drug Calculation: Satisfactory/Unsatisfactory.

HNB2134 CLINICAL PRACTICUM 2: ACUTE CARE
Campus b 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.

Required Reading

Subject Hours Equivalent of 40 hours.
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 care planning; documentation of competence in selected skills, according to specified criteria, and in line with the ANC 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.

HN2135 NURSING PRACTICE 3: HEALTH & ILLNESS IN OLDER ADULTS
Campus St Albans
Prerequisite(s) Nursing Practice 1: Acute Care
Content
The content of this subject will be organised around the Functional Health Patterns: Health Perception & Management; Activity & Exercise, Nutrition & Metabolism, Sleep & Rest, Cognition and Perception, Sexuality and Reproduction and Values and Beliefs. This subject includes exploration of the demographics of the Australian population and the contribution to society of older adults; ageism: stereotypes, myths and reality; the normal ageing process and adjustment to change; risk assessment and safety: includes issues relating to sensory changes, musculoskeletal changes and falls; considerations that impact on the wellbeing of the older person: includes promotion of sleep, nutrition, and exercise; dementia, depression and other disorders common in the older population: includes impact on the person and the family; factors that impact on care needs including culture, spirituality and sexuality; ethical and legal concerns: focus on the rights of the older adult in acute care settings. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

Required Reading
Recommended Reading

Subject Hours Equivalent of 40 hours.
Assessment
Essay (2500 words) – 60%, Individual portfolio – 40%.

HN2136 CLINICAL PRACTICUM 3: HEALTH AND ILLNESS IN OLDER ADULTS
Campus St Albans
Prerequisite(s) Nursing Practice 1: Acute Care, Clinical Practicum 1: Acute Care
Content
Drawing on experience from preceding subjects and clinical experiences students will be expected to develop the foundation skills and knowledge for evolving independence in the delivery of nursing care to the older adult. The completion of a University-specific assessment tool will enhance the student’s clinical communication/documentation skills. Client-student ratios will be graduated throughout the placement depending on the capacity of the
agencies providing the experience. Credit Transfer Arrangements 
(including Articulation Pathways) if applicable.

**Required Reading**

**Recommended Reading**

**Subject Hours**
Equivalent of 70 hours organised to teaching mode used.

**Assessment**
In order to be awarded a satisfactory grade for this subject, students must complete a university specific work-book related to their experience, to a standard commensurate with their level in the course; demonstrate competence in selected skills, according to specified criteria, and in line with the ANC Competencies as defined for a student at this stage of the course. Final assessment: Satisfactory/Unsatisfactory.

**HNB2137 ETHICS AND LEGAL STUDIES**

**Campus**
St Albans

**Prerequisite(s)**
Nil

**Content**
The aim of this subject is to introduce nursing and midwifery students to key concepts in ethics and law. The subject aims to develop an understanding of ethical and legal dimensions of practice with the opportunity to examine theory, principles and moral arguments related to professional practice and health care issues.

**Required Reading**

**Recommended Reading**

**Legislation**

**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, or other appropriate methodologies will be used: written assessment, reflective journal, learning folio, oral presentation.

**HNB2138 NURSING THEORY 3 HEALTH & ILLNESS IN OLDER ADULTS**

**Campus**
St Albans

**Prerequisites**
HNB 1232 Nursing Theory 1: Acute Care

**Learning Outcomes**
On completion of this subject students should be able to:

- Discuss the demographic characteristics of older adults;
- Differentiate between the myths and realities about ageing;
- Develop a view of ageing that incorporates biological, sociological and psychosocial perspectives;
- Recognise the factors involved in promoting and maintaining the health and safety of older adults and to be able to identify those at risk;
- Describe and discuss nursing strategies that are supportive of the health needs of older people living in the community, within residential care facilities or on admission to acute or rehabilitative care venues;
- Discuss the specific care needs of older people from a variety of cultural and sub-cultural groups, with a particular focus on Australia’s Indigenous population;
- Discuss patterns of care that maintains the dignity of older people and maximises their autonomy and independence;
- Identify the services and resources that are available to support the older population; and
- Discuss the context of care for older adults in institutional, residential, or community settings.

**Content**
The content of this subject will be organised around the Functional Health Patterns: Health Perception & Management; Activity & Exercise, Nutrition & Metabolism, Sleep & Rest, Cognition and Perception, Sexuality and Reproduction and Values and Beliefs. This subject includes exploration of:

- Demographics of the Australian population and the contribution to society of older adults;
- Ageism: stereotypes, myths and reality;
- The normal ageing process and adjustment to change;
- Risk assessment and safety: includes issues relating to sensory changes, musculoskeletal changes and falls;
- Considerations that impact on the wellbeing of the older person: includes promotion of sleep, nutrition, and exercise;
- Dementia, depression and other disorders common in the older population: includes impact on the person and the family;
- Factors that impact on care needs including culture, spirituality and sexuality;
- Ethical and legal concerns: focus on the rights of the confused older person and alternatives to restraint;
- Options and care services: includes accommodation choices, case management and community supports;
- Supporting older adults and their families in the community;
- Specific care needs of older people from a variety of cultural and sub-cultural groups, with a particular focus on Australia’s Indigenous population; and
- Specific care needs of the older adult in acute care settings.

**Required Reading**

**Recommended Reading**

**Assessment**
Essay (2500 words.) 60% Individual portfolio 40%.
organisational factors will also be considered in the analysis of client care in clinical settings. Credit Transfer Arrangements (including Articulation Pathways) if applicable.


In addition, students will be provided with more specific website information under set topic areas.

Subject Hours Equivalent of 40 hours.

Assessment Problem based learning (PBL) group exercise 30%, 1½ hour Examination 40%, case study related literature review (1200 words) 30%.

HNB2234 PRACTICUM 4: ACUTE CARE

Campus St Albans

Prerequisite(s) Nursing Practice 2: Acute Care, Clinical Practicum 2: Acute Care, Nursing Practice 3: Health & Illness in Older Adults, Clinical Practicum 3: Health & Illness in Older Adults

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 skills. Client-student ratios will be graduated throughout the placement and numbers will depend upon the level of acuity.


Subject Hours Equivalent of 70 hours.

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 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.

HNB2235 NURSING PRACTICE MENTAL HEALTH & ILLNESS

Campus St Albans

Prerequisite(s) HNB1133 Foundations in Nursing in 1, HNB1134 Foundations in Nursing in 2, AP1T3111 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.


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.


Subject Hours Equivalent of 70 hours organised according to teaching mode used.

Assessment Achievement of clinical competencies (Ungraded: Pass/Fail).

HNB2237 NURSING THERAPEUTICS: APPLIED MEDICATION MANAGEMENT

Campus St Albans

Prerequisite(s) Human Bioscience 3: Pathophysiology, Nursing Practice 4: Acute Care, Nursing Practice 5: Mental Health & Illness

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 nurses in education and medication therapeutic intervention; and exemplars of commonly used drug groups. Credit Transfer Arrangements (including Articulation Pathways) if applicable.

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

- Demonstrate the application of knowledge acquired through relevant 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 Nursing, Incorporated 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.
- Develop 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.
- Conduct comprehensive psychiatric assessment and interviewing.
- 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.

Recommended Websites

• 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.

**Required Reading**

**Recommended Reading**

**Learning Outcomes**
- 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 and practically theorethetical 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 (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, 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 in the analysis of client care in clinical settings.

**Required Reading**

**Recommended Websites**
- Virtual Hospital: http://www.vh.org/ Virtual Hospital: http://www.vh.org/
HNB3101 RESEARCH FOR PRACTICE

Campus St Albans

Prerequisite(s) Nil

Content Significant of research in nursing: links between nursing 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 the 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 nursing research; evaluate research reports and appraise a systematic review of the literature; basic statistics for appraisal of systematic reviews, including statistical significance, chance, probability, confidence intervals, odds ratios, numbers needed to treat and costs in analysis; and how to appraise the professional application of a systematic review and meta analysis to an aspect of professional practice. Credit Transfer Arrangements (including Articulation Pathways) if applicable.


Subject Hours Equivalent of 40 hours.

Assessment Assignment (2000 words) – 50%, two hour examination – 50%.

HNB3103 NURSING PRACTICE 6: CHILD, ADOLESCENT & FAMILY

Campus St Albans

Prerequisite(s) Human Bioscience 4, Nursing Practice 4: Acute Care, Nursing Practice 4: Mental Health & Illness, Clinical Practicum 4: 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 60%, tutorial presentation (Case study) 20%, written summary of tutorial presentation 20%.

HNB3104 CLINICAL PRACTICUM 6: CHILD, ADOLESCENT & FAMILY

Campus St Albans

Prerequisite(s) Human Bioscience 3: Pathophysiology, Nursing Practice 4: Acute Care, Clinical Practicum 4: Acute Care, Nursing Practice 5: Mental Health & Illness, Clinical Practicum 5: Mental Health & Illness

Content Students will undertake 70 hours of clinical practice and engage in reflective practice with a mentor/clinical educator.


Subject Hours Equivalent of 40 hours.

Assessment Two hour examination 60%, tutorial presentation (Case study) 20%, written summary of tutorial presentation 20%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

HNB3105 NURSING THEORY 7 – ACUTE CARE
Campus St Albans
Prerequisite(s) HNB2233 Nursing Practice 4: Acute Care; RBM2233 Human Bioscience 3: Pathophysiology
Content The Content of this subject will be organised around health breakdown, which causes significant dysfunction in several Functional Health Patterns: The role of the Division 1 Registered Nurse as co-ordinator of patient care; models of co-ordinated care used in Australia; clinical pathways: critique of Patterns of Care; multi-disciplinary communication and co-ordination skills; ‘holistic care’: the effect cultural or indigenous background may have on the care needed/provided; the role and function of ‘Hospital in the Home’ programs; the role of ‘care co-ordinators’; and care of patients with complex health breakdown, including HIV/AIDS, shock and multi system failure, adult respiratory distress syndrome, chronic renal failure, cancer.
Assessment Written critique paper (2000 words) – 50%, scenario based clinical decision-making exercise – 50%.

HNB3106 CLINICAL PRACTICUM 7: ACUTE CARE
Campus St Albans
Prerequisite(s) Nursing Practice 4: Acute Care. Clinical Practicum 4: Acute Care. Human Bioscience 3: Pathophysiology
Content Students will undertake 70 hours of clinical practice and engage in reflective practice with a mentor/clinical educator. The focus of the patients allocated to the students should be those patients who are in need of co-ordinated care so that the students can observe the complexities of managing this type of patient in the clinical area.
Assessment Written critique paper (2000 words) – 50%, scenario based clinical decision-making exercise – 50%.

HNB3107 NURSING PRACTICE 6: HEALTH & ILLNESS IN THE COMMUNITY
Campus St Albans
Prerequisite(s) Nil.
Content The Content of this subject will be organised around the Functional Health Patterns, in particular: Health Perception & Management (community, health education and health promotion). Epidemiological transition and its relationship to community nursing from the 19th to the 21st Century; Frameworks, for understanding community nursing in the 21st century; What the differences mean – comparing contemporary community nursing roles; The social determinants of health – understanding the mechanisms; Determining need – different approaches to needs assessment; Demographic data – what can it suggest about a community and its likely health needs?; Epidemiological data – revisiting the social determinants of health; Successful health education and promotion interventions – a world view; Using health education and health promotion strategies; Working with disadvantaged groups – whose needs?, Working across cultures, including with Aboriginal groups; Behavioural interventions and their strengths and limitations; Family and community assessment; Accessing community services; Current and future challenges facing community nursing; and Global and local prevention of infectious diseases, including, HIV/AIDS, bird flu, SARS.
Assessment Written critique paper (2000 words) – 50%, two hour examination – 50%.

HNB3108 NURSING THEORY 6 CHILD ADOLESCENT & FAMILY
Campus St Albans
Prerequisite(s) RBM 2517 Human Bioscience 3: Pathophysiology, HNB 2233 Nursing Theory 4: Acute Care, HNB 2238 Nursing Theory 5: Mental Health & Illness.
Co-requisites Nil.
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;
- Develop beginning skills in providing care and support for children/adolescents and their families;
- Select appropriate strategies and interventions which assist in the reduction of stress and anxiety for the child/adolescent;
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.

Recommended Reading

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.

**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%.

**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 understanding of: 

- **Assessment**

  - Equivalent of 70 hours organised according to teaching mode used.

  - **Assessment**

    - Students will be required to work in groups to undertake a community needs analysis in a nominated geopolitical area. This will draw on normative data including Australian Bureau of Statistics demographic and Department of Human Services Burden of Disease data. Then students will be required to gather their own information in their nominated area and use one recognised framework for guiding their data collection, analysis and presentation. A graded mark will be given for each group poster and separate summary.

  - **Subject Hours**

    - Equivalent of 70 hours organised according to teaching mode used.

**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.

**Recommended Reading**


**Required Reading**


**Websites**

- www.healthsci.utas.edu.au/nursing/college/
- www.mhca.com.au
- www.healthsci.utas.edu.au/nursing/college/
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 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. 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.

Required Reading

Recommended Reading


Assessment
Seminar presentation 35%; Examination 65%.

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

Subject Hours Equivalents 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%.

HN3204 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.


HN3215 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, prevention and management of aggression;
• Discuss 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).

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, assisting and reflecting on the prevention of aggression; observing and reflecting on the therapeutic management of aggression; observing and participating in case management; developing an understanding of mental health policy and issues related to mental health service provision; exploring the role of self-help groups and Non-Government Organisations (NGO’s) in the provision of care; practising cultural sensitivity when planning and implementing care; participating in family sensitive practice; supporting the concept of social inclusion and stigma; supporting the role of consumer representatives in 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 for developing consumer advocate; further developing communication and assessment skills.

**Required Reading**


**Recommended Reading**


**Prerequisites**

HNB2238 Nursing Theory 5: Mental Health & Illness, HNB2329 Clinical Practicum 5: Mental Health & Illness

**Co-requisites**

- Nil

**Learning Outcomes**

On completion of this subject, students will be able to: participate in psychotherapeutic approaches to care, such as cognitive behaviour therapy, and group therapy; observe and assist in the prevention of aggression; observe the therapeutic management of aggression; reflect on his or her practices in the prevention and management of aggression; participate in case management; develop an understanding of mental health policy and issues related to mental health service provision; explore the role of self-help groups and Non-Government Organisations (NGO’s) in the provision of care; practice cultural sensitivity when planning and implementing care; participate in family sensitive practice; understand the concept of social inclusion and stigma; understand the role of the consumer in mental health care; discuss psychotropic medication in relation to the knowledge and skills in administration, including the related roles of nurses, consumer and carers; understand the skills required to effectively document consumer care; further develop communication and assessment skills.

**Recommended Reading**


**Prerequisites**

HNB2238 Nursing Theory 5: Mental Health & Illness, HNB2329 Clinical Practicum 5: Mental Health & Illness
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Content
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; 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; and developing an understanding of mental health policy and issues related to mental health service provision.

Required Reading

Recommended Reading

Subject Hours
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: demonstration of competence in skills in line with those required for a graduate nurse at beginning level, in line with the ANCI competencies (1998); 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 examination: Satisfactory/Unsatisfactory.

HNB3236 TRANSITION TO PROFESSIONAL PRACTICE
Campus St Albans
Prerequisite(s) Nil.

Content
The topics to be taught in this subject are: the health care system and various forces influencing health care delivery including health policy; organisational structures and functions; leadership, followership; principles of management and management of resources; organisational culture; effective communication strategies, problem solving, prioritising and decision making; quality improvement and interview techniques. Credit Transfer Arrangements (including common paediatric conditions and specific needs of sick children and their families). Observation and managing the relationship between nursing research and nursing practice. It aims to provide a broad range of research designs and methodologies that are currently utilised by nurse researchers and to validate and refine existing nursing knowledge in order to improve nursing practice.

Required Reading

Recommended Reading

Subject Hours
Equivalent of 40 hours organised according to teaching mode used.

Assessment
Assignment – 1,500 words: 40% Critically appraise a specific nursing research article related to the subject aims. Examination – two hours: 60%. This will be a combination of multiple choice questions and short answer questions.

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, Nursing Practice 8: Child and Family Health and Clinical Practicum 8: Child and Family Health.

Subject Aims
The aim of this subject is to develop students, knowledge and skills to meet the need of child and family in a paediatric environment. It is designed to build upon the growth and developmental perspectives of childhood and adolescence, health promotion and support during these developmental experiences, including common paediatric conditions and specific needs of sick children and their families.

Content
Review of principles of growth and development in relation to acute paediatric nursing, such as sick child and adolescent in hospital or community, the effects of hospitalisation, common medical/surgical conditions, long term/terminal illness, the effects of the child's illness on the family. Communication with children, adolescents, the families. This includes communication with families from diverse cultural backgrounds. Health promotion and societal concerns of childhood and adolescence such as substance abuse, AIDS, child abuse, suicide.
Methods of Teaching
The focus of teaching-learning approaches is to draw upon to various cultural and indigenous groups.

Required Reading

Subject Hours Equivalent to 40 hours distributed according to the teaching mode used.

Assessment
Case management study, comprising: Interview and assessment 40% (1900-2100 words); Case management report 60% (2800-3000 words).

HNB3245 CLINICAL PRACTICUM 9: (ELECTIVE)
CHILD AND FAMILY HEALTH
Campus St Albans
Prerequisite(s) 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

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 apply 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 on a ratio of 1:8 to supervise students during their clinical practice experience. Alternatively, a preceptorship approach may be used, depending on the requirement of the agency at which the student is placed.

Required Reading

HNB3248 CLINICAL PRACTICUM 8 (ELECTIVE): CHILD, ADOLESCENT & FAMILY
Campus St Albans
Prerequisite(s) Nursing Practice 6: Child, Adolescent & Family, Clinical Practice 6: Child, Adolescent & Family

Content
Students will undertake 140 hours of clinical practice in a range of institutional, residential or community health care settings.

Required Reading

Recommended Reading

Subject Hours Equivalent to 40 hours.

Assessment
Case study (2000 words) – 50%, Project (2000 words) – 50%.

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 the paediatric clinical environment, 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 range of institutional, residential or community health care settings. Students will undertake clinical practice in settings such as children and adolescents including childhood accidents and trauma, and sexually transmitted disease prevention; and adapt aspects of the teaching mode used.

Required Reading

Recommended Reading

Subject Hours Equivalent to 40 hours.

Assessment
Case study (2000 words) – 50%, Project (2000 words) – 50%.

HNB3249 CLINICAL PRACTICUM 8 (ELECTIVE): HEALTH & ILLNESS IN OLDER ADULTS
Campus St Albans
Prerequisite(s) Nursing Practice 3: Health & Illness in Older Adults, Clinical Practice 3: Health & Illness in Older Adults

Content
The student will undertake clinical practice in community care and engage in reflective practice with a mentor/clinical educator.

Required Reading

Recommended Reading
HNB3250 CLINICAL PRACTICUM 5: CONSOLIDATION
Campus St Albans
Prerequisite(s) Nursing Practice 3: Health & Illness in Older Adults, Clinical Practicum 3: Health & Illness in Older Adults.
Content
The student will undertake clinical practice and engage in reflective practice with a mentor/clinical educator.
Required Reading
Sydney: Churchill Livingstone.
Recommended Reading
Subject Hours
Equivalent of 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: 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 effective 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.

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: Co-morbidities, 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 an 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.
Required Reading
Clinical psychomotor skills. Assessment tools for nursing students (2nd ed.). Tuggerah, NSW: Social Science Press.
Recommended Reading
Subject Hours
Equivalent of 40 hours.
Assessment
Case study assignment (2000 words) – 50%, Project (2000 words) 50%.

HNB3252 CLINICAL PRACTICUM 8: (ELECTIVE) ACUTE CARE
Campus St Albans
Prerequisite(s) 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
Final assessment: Satisfactory / Unsatisfactory.

Required Reading

References


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 care 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 clinical placements;
- 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.

HNB3271 NURSING PRACTICE 8 ACUTE CARE
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:

- 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 specific interventions; 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 organizing framework for client assessment.

Required Reading

Recommended Reading

Recommended Websites

- Department of Human Services, Victorian State Government: www.dhs.vic.gov.au
- Australian Department of Health and Aging: www.health.gov.au
- Australian Resuscitation Council: www.resus.org.au
- Heart Foundation (Australia): www.heartfoundation.com.au
- Asthma Victoria: www.asthma.org.au
- Asthma Australia: www.asthma.org.au
- National Asthma Council: www.nationalasthma.org.au
- The Cancer Council: www.accc.org.au
- National Breast Cancer Centre:www.nbcc.org.au
- Papscreen Victoria: www.papscreen.org
- International Diabetes Institute: www.idi.org.au
- Virtual Hospital: www.vh.org

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. In this 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 and situational 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.

HNB3272 NURSING PRACTICE 8 MENTAL HEALTH & ILLNESS
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

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

Required Reading

Recommended Reading

Class Contact Equivalent of 40 hours over one semester comprising of lectures, tutorials and seminars & workshop.

Assessment
Case management study, comprising: Interview and assessment 40% (1900-2100 words); 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 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

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 of 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

Class Contact Equivalent of 40 hours organised according to teaching mode used.

Assessment
Assignment 3000 words – 60%; class presentation 1500-2000 words – 40%.

HNB3274 CLINICAL PRACTICUM 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

Learning Outcomes
On completion of this unit, students should be able to:
- demonstrated the application of knowledge acquired through related theoretical and skills based units;
- 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 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 process practice 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.


Recommended Websites:

• Department of Human Services, Victorian State Government: www.dhs.vic.gov.au

• Australian Department of Health and Aging: www.health.gov.au

• Australian Institute of Health and Welfare: www.aihw.gov.au

• Australian Bureau of Statistics: www.abs.gov.au


Class Contact 140 hours of clinical experience, comprising of five days per week, seven hours per day for six weeks.

Assessment In order to be awarded a satisfactory grade for this unit, the student must successfully complete each of the following: Satisfactory performance of holistic assessment of one client, as demonstrated by care planning documentation. Mastery of 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. Demonstration of safe and competent practice in line with what is required for a graduate nurse at beginning level, and in line with the ANCI Competencies (1998).

Final assessment: Satisfactory / Unsatisfactory.

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.


Recommended Reading

1. Preventing Vascular Complications in People with Diabetes
2. An analysis of the impact of the use of computerised systems on patient safety in hospitals
3. The role of nurses in the management of chronic pain in cancer patients
4. The effectiveness of mindfulness-based interventions in reducing anxiety in cancer patients
5. The impact of healthcare policies on the quality of care for patients with chronic conditions

Assessment

In order to be awarded a satisfactory grade for this unit, the student must successfully complete each of the following: Satisfactory performance of holistic assessment of one client, as demonstrated by care planning documentation. Mastery of 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. Demonstration of safe and competent practice in line with what is required for a graduate nurse at beginning level, and in line with the ANCI Competencies (1998).

Final assessment: Satisfactory / Unsatisfactory.

SCHOOL OF NURSING AND MIDWIFERY
HNB7309 APPLIED MEDICATION MANAGEMENT

Campus St Albans

Prerequisites HNM 7114 Midwifery Studies 1: The Childbearing Journey, HNM 7202 Midwifery Practice 2: The Childbearing Journey, HNM 7203 Midwifery Studies 3: Childbearing Complications, HNM 7204 Midwifery Practice 3: Childbearing Complications

Learning Outcomes Students will be expected to:
- Develop an understanding of the general principles of pharmacology as they relate to midwifery practice;
- Have acquired a knowledge of legislation and ethical 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.

Co-requisites
- 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.

Required Reading

Recommended Reading
core text for integrated curricula with self-assessment (2nd ed.).

Edinburgh: Churchill Livingstone.

Class Contact Equivalent of 56 hours

Assessment
1½ 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.

Required Reading

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 GERONIC 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 nurse practitioners, it is imperative that each student recognises the need for self-determination of learning modalities. The subject includes: intellectual culture – contextual knowledge; the nature, development of the various kinds of knowledge. The subject also aims to define the focus of the study (such as physiological healing, pain management, continence 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.

HNN4101 INQUIRY INTO NURSING KNOWLEDGE

Campus St Albans

Prerequisites Nil

Co-requisites 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


Class Contact 36 hours per semester.

Assessment Seminar presentation, 50%; Written paper, 50%. (2500 words).

HNN4102 ADVANCED QUANTITATIVE RESEARCH METHODS

Campus St Albans

Prerequisites HNR 0001 Introduction to Research Design and Methods

Co-requisites Nil.

SCHOOL OF NURSING AND MIDWIFERY
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. The focus of the course will be on statistical analyses as 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 (or pilot) 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; and
- Writing up of qualitative research.


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 conduct 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 conduct 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.

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 would be 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.

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.

HNN4314 MINOR THESIS B (FULL TIME)

Campus St Albans

Prerequisite(s) HNN4312 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.

HNM2010 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 during 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; Relevant components of the Scope of midwifery practice; Advocacy; Loss. Environment: Technology; Maternity Matters; Induction of labour; Instrumental birth; Mat presentations; Multiple birth; 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 MIDWIFE 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 of self & 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 for enhancing the vision of midwifery. 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 midwifing 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; Dynmap 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. Ethio-legal
Issues: Informed consent; Rights of the woman; Use of technology. Principles of primary level counselling.

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

**Recommended Reading**

**Subject Hours** A practice subject of 208 hours for one semester.

**Assessment** Practice assessment based on ACM1 competency standards. Partnership log, focusing 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 women 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. Midwife promoting women’s wellness: strategies for promoting breast awareness and mammography screening (mammochek 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 chemotheraphy to be taken into consideration when planning care for women.

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

**Recommended Reading**

**Subject Hours** A practice subject of 208 hours for one semester.

**Assessment** Practice assessment based on ACM1 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 critically 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.
- 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

**Content** 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**

**Recommended 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 word/unit.

**Required Reading**


**Recommended Reading**


**Recommended Reading**


**Recommended Reading**

HNM5105 FIELDWORK: MENTAL HEALTH PRACTICE  
Campus St Albans/Off-Shore  
Prerequisites Nil  
Content Students will undertake 120 hours of clinical practice and engage in reflective practice with a mentor. One 3-hour introduction to the subject.  
Assessment Essay about evidence based practice 35% (1900-2000 words). Appraisal of a systematic review of the literature on a nominated topic 65% (2700-2900 words).  
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:  
• utilise concepts from a range of disciplines to obtain an advanced medical history relevant to their field of practice;  
• assess patients’ physical status utilising their understanding of the complications and consequences of disease processes;  
• develop assessment of patients’ mental and psychological states and 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 client’s 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.  
Class Contact 36 hours  
Assessment 50% Workbook, 50% Case history and presentation.
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

Dysrhythmia: VT and VF/ Atrial dysrhythmias
AV blocks
Escape rhythms
Myocardial ischaemia and infarction patterns.


OR


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%.

HN5108 CLINICAL STUDIES 1 (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 beginning competence in orthopaedic nursing practice.

Content The content includes: Principles and practice of orthopaedics and orthopaedic nursing; advanced health assessment; musculo-skeletal assessment; traction application and management; POP and synthetic casting application and management; pathophysiology and clinical assessment of musculo-skeletal disorders which include traumatic disorders and non-traumatic disorders such as: fractures, inflammatory diseases, degenerative diseases, and complications; 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.


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.

HN5109 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, gastrointestinal, 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.


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) Students must pass each component of the assessment, including the clinical journal, in order to pass this subject.

HN5111 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;
• 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, finances 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

Recommended Reading

Recommended Reading

Class Contact
Two hours lecture per week for 12 weeks
One-hour tutorial per week for 12 weeks.

Assessment
1. Hurdle requirements of reflective journal related to tutorial participation, 80% attendance required. 2. Each student is required to write a 2,500 word assignment related to theories of addiction (60%). 3. The student will develop a drug and alcohol program targeting a specific cohort. The student will present this program to the class (40%).

HNM5117 CLINICAL STUDIES 2 (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
Diabetes Care
- Pathophysiology of Diabetes type 1 and 2
- Oral hypoglycaemics and principles of insulin therapy
- Management of hypoglycaemia
- 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
- Most 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
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.
- assignments include: 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; multidisciplinary team approach and communication; and principles and methods of pain management in orthopaedic nursing; leadership in orthopaedic nursing; spinal cord injury; paediatric disorders; oncoplastic; and metabolic bone diseases.

Recommended Reading

Recommended Reading

Class Contact 36 hours.

Assessment Group presentation of Nursing Management of one acute medical or surgical condition discussed in this subject. 40% Written examination. 60%.

HNM5119 CLINICAL STUDIES 2 (PAEDIATRIC NURSING)
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes The Unit provides students with opportunities to:
- further develop the knowledge acquired in Paediatric Nursing 1; 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.
- have a comprehensive understanding of the content of teaching theories and learning; management in paediatric nursing; and effects on paediatric nursing care; critical examination and analyses 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.

Recommended 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) Students must pass each component of the assessment, including the clinical journal, in order to pass this subject.

HNM5121 DIABETES DISEASE PROCESSES AND TREATMENT
Campus St Albans
Prerequisites Nil
Co-requisites Nil

Learning Outcomes On completion of this subject, students should be able to:
- explain the epidemiology of diabetes in varying cultures;
- explain advanced concepts of cellular metabolism;
- demonstrate an understanding of the impact of diabetes on the integration of human body systems which act together in complex body functions in healthy states;
- analyse the normal glucose metabolic pathways and their dysfunction in diabetes mellitus;
- demonstrate knowledge of organs and tissue structure related to diabetes that is essential for theoretical, research, clinical and pathological evaluations ranging from macromolecules to whole organ level;
- critique new knowledge regarding the complications and consequences of diabetes mellitus based on a strong scientific knowledge base;
- Understand clinical presentation, treatment and management of diabetes;
- Understand the use of oral hypoglycaemic agents and Insulin treatment regimes;
- Explain macrovascular and microvascular complications in relation to Diabetes complications; and
- Understand dietary and lifestyle management of diabetes.

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

SCHOOL OF NURSING AND MIDWIFERY

• Assessing pain
• Principles of acute pain management
• Patient controlled analgesia
• Chronic pain
• Palliative pain management.

Required Reading

OR

Recommended Reading
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

- Changes in physiology relating to exercise, with focus on impact to metabolic functions
- Types of diabetes
- Aetiology and 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
- Recommended Reading

Required Reading

Recommended Reading

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
  - Co-requisites 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.

- Required Reading
  - Recommended Reading

- Required Reading
  - Recommended Reading

- 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 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

- Recommended Reading

- 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
  - 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 perform an advanced health assessment, including:
      - 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 Exploratory 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.

**Required Reading**


**Recommended Reading**


**Class Contact**

36 hours

**Assessment**

50% Assignment 2500 words. 50% Case history and presentation (20 minutes).

---

**HN5201 DIABETES CLINICAL INTERNSHIP**

**Campus** St Albans

**Prerequisites**

HN5114 Substance Abuse Studies 1 and HN5124 Substance Abuse Studies 2

**Co-requisites**

Nil

**Learning Outcomes**

On the completion of this practicum, the students should be able to:

- develop and enhance diabetes education and management clinical skills introduced in theoretical subjects in a practice setting;
- observe, and practise under the supervision of, experienced clinicians in interviewing, assessing, and managing the care of diabetes clients;
- further develop their understanding of evidence-based practice in diabetes;
- expand their theoretical knowledge of learning and teaching principles, counselling techniques and communication strategies in a diabetes clinical setting;
- plan, develop, implement and evaluate client and peer educational diabetes programs;
- participate in a community oriented health education/promotion program involving needs assessment, planning, implementation and/or evaluation phases;
- extend their understanding of the multidisciplinary nature of diabetes care;
- Work towards further developing personal skills in diabetes education and management which includes:
  - 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.

**HN5204 SUBSTANCE ABUSE CLINICAL INTERNSHIP**

**Campus** St Albans

**Prerequisites**

HN5114 Substance Abuse Studies 1 and HN5124 Substance Abuse Studies 2

**Co-requisites**

Nil

**Learning Outcomes**

On the completion of this practicum, the students should be able to:

- develop and enhance Substance Abuse education and management clinical skills introduced in theoretical subjects in a practice setting;
- observe, and practise under the supervision of, experienced clinicians in interviewing, assessing, and managing the care of Substance Abuse clients;
- further develop their understanding of evidence-based practice in Substance Abuse;
- expand their theoretical knowledge of learning and teaching principles, counselling techniques and communication strategies in a Substance Abuse clinical setting;
- plan, develop, implement and evaluate client and peer educational Substance Abuse programs;
- participate in a community oriented health education/promotion program involving needs assessment, planning, implementation and/or evaluation phase(s);
- extend their understanding of the multidisciplinary nature of Substance Abuse care;
- Work towards further developing personal skills in Substance Abuse and management which includes:
  - 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**

A total of 72 hours will be spent at a diabetes facility that provides Diabetes Education (eg. hospital or medical clinic) under the supervision of an accredited Diabetes Educator. Students will engage in, and/or observe, practice in all fields of diabetes education, including: health assessment, one-on-one and group education, health promotion and education of allied health practitioners.

A Clinical Assessment Schedule (CAS) will be developed by the School of Nursing & Midwifery using the ADEA Diabetes Clinical Education Competency Guidelines.

**Required Reading**


**Recommended Reading**


**Class Contact**

Total of 72 hours Students will be allocated to various clinical placements. Students will be supervised by a Diabetes Educator at appropriate diabetes clinics and tertiary referral centres with diabetes management facilities. This will include services provided by podiatrists and optometrists.

**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. 2 Satisfactory completion of a case history of diabetes management regime.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Introduction to Addictive Behaviors (2nd ed.), Guilford Press, New York.

Recommended Reading

Class Contact Clinical practice of 72 hours
Assessment A satisfactory pass related to clinical competency assessment devised by Victoria University.

HN5209 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.

Required Reading

Class Contact 4 hours – seminar. 32 hours 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 Reflective Journal: 20% (1000 – 2000 words).

HN5211 ADVANCED CLINICAL MEDICATION MANAGEMENT (DIABETES EDUCATION AND MANAGEMENT)
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 eavenomation;
• Drug therapy for all body systems, examples: Endocrine, CNS, Gastrointestinal, Cardiovascular, Respiratory systems;
• Sedatives and hypnotics;
• Drugs for hyperlipidaemia;
• Anti-inflammatoxy 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.

Required Reading

HN5214 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

Recommended Reading
As advised by lecturer

HN5215 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 eavenomation;
• Drug therapy for all body systems, examples: Endocrine, CNS, Gastrointestinal, Cardiovascular, Respiratory systems;
Medical/Surgical nurse practitioner: leader, manager, educator, in specialised Medical/Surgical nursing practice; role of the advanced researcher, and collaborative consultant in the health care team.

Assessment
Class Contact
Recommended Reading
NSW, Australia: Allen & Unwin.

Required Reading

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%.

HNM5217 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 orthopaedic nursing. As each student’s learning experience at the time of entry to this unit 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

Recommended Reading

Class Contact 4 hours comprising 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 – 1500 words).

HNM6029 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 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 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 one semester comprising one two-hour lecture and one one-hour tutorial.

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.


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.

Required Reading Nil.

Learning Outcomes Upon completion of this subject, students should be able to:

• Analyse structure, process and outcome of activities in their professional healthcare practice;
• Identify an area of personal interest to improve practice by developing a proposal to and implement change;
• Promote the highest standard of professional healthcare practice and excellence in their specialised field of practice;
• Demonstrate independence, autonomy, and clinical decision-making skills in a multi-disciplinary environment;
• Promote individual commitment to, and recognition of life long learning;
• 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;
• Sacking 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.

Becoming a motivational practitioner. Radcliffe: Oxford University

evaluation, efficacy of a particular treatment modality, psychosocial or

Content

The guidance of a supervisor. It is intended to allow the
course on the core area of study. It is intended to allow the

evaluation, efficacy of a particular treatment modality, psychosocial or

Teaching and learning approaches.

Relevant research findings;

Competently utilise available evidence for continuous practice

The policy context and its appraisal

Advanced Nursing, 29(3), 746-750. Cheek, J. & Gibson, T. 

Policy matters: critical policy analysis and nursing. Journal of

Identify an area of personal interest to improve practice by

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, autonomy 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

Required Reading

Sitdel, M. (Ed.). (2003). Debates and dilemmas in 

promoting health: a reader. (2nd ed.). Basingstoke, Palgrave 

Macmillan.

Recommended Reading


---

HNM6135 SPECIALISATION CLINICAL PROJECT

PART TIME

HNM6200 HEALTH PROMOTION

Campus St Albans

Nil.

Nil.

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, autonomy 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

Required Reading

Sitdel, M. (Ed.). (2003). Debates and dilemmas in 

promoting health: a reader. (2nd ed.). Basingstoke, Palgrave 

Macmillan.

Recommended Reading


**HN6800 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 external examiners from an appropriate area of expertise.

**HN6801 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 external examiners from an appropriate area of expertise.

**HN7006 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.


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.

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; Intra-uterine growth restriction; Fetal death in utero; Antepartum haemorrhage; Variations in blood pressure; Diabetes; Chemical dependency; Surgical conditions. Module Two: Midwifery and Obstetric Care: Positions, lies 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
Prerequisite Nil.
Co-requisite 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 for midwifery practice;
- Explore strategies to facilitate the establishment of professional support and network for midwives considering private practice;
- Demonstrate an understanding of the political-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 ACM! 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.

Required 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.

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 practice; 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.

Assessment of the woman and her baby; Working with a woman to give birth; Working with a woman to give nourishment to her baby; Working with a woman to care for herself and her baby before and after birth; and Documentation of midwifery actions and women's attitudes and responses.

Required Reading


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

Prerequisites

HBNW – 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 with 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 with 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.

Required Reading


HNM7208 CONTINUITY OF CARE TWO

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;
- Explore working with woman in childbearing using the theoretical understandings gained in the midwifery and anatomy and physiology subjects;
- Demonstrate developing 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 being with woman and her baby at various stages of pregnancy;
- Demonstrate the ability to undertake higher level health documentation in midwifery;
- Accurately assess, collect and record data for health profiles/histories of being with woman during childbearing;
- Make contact with a minimum of ten women from pregnancy through to the early weeks after birth;
- Apply evidence-based knowledge to midwifery practice;
- Examine the politics of maternity services;
- Explore contemporary issues and trends which influence midwifery practice and the role of the midwife; and
- Discuss the professional standards and requirements informing midwifery practice.

Contact

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 a minimum of ten women from pregnancy through to the early weeks
after birth beginning in semester 1 and continuing to semester 2. This subject will also examine a broad range of contemporary issues and trends that impact with woman within the context of childbearing and midwifery practice. The understanding and application of evidence-based knowledge will be utilised related to midwifery practice.


**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 Continuity of Care report (1000 words): Satisfactory/ Unsatisfactory.

**HNM7226 MIDWIFERY STUDIES 4 WOMENS HEALTH**

**Campus** St Albans

**Prerequisites** Nil

**Learning Outcomes** Students will be expected to:
- Describe the essential components to be considered when performing a comprehensive with woman health assessment;
- Discuss the principles of primary health care in the promotion of health and wellness with diverse groups of women experiencing treatment for a range of with woman health problems;
- Demonstrate knowledge of the common health problems with woman may experience throughout various life stages;
- Display an understanding of the physical and psychological aspects associated with selected with woman health problems;
- Apply evidence-based knowledge to midwifery practice; Identify the range of responses with woman may experience when confronted with a body altering health problem;
- Explore strategies to promote with woman participation in informed decision making and taking responsibility for self care; and
- Demonstrate an understanding of the need for reflexive practice and the implementation of evidence informed care in private practice.

**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 and applications of 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
- With woman Health Across The Lifespan – Physical Problems
- With woman Health Across The Lifespan – Mental Health & Addictive Disorders
- Infertility
- IVF
- HIV & AIDS
- Breast health and disease
- Being with woman with cancer
- Menopause
- Chronic illness

**SCHOOL OF NURSING AND MIDWIFERY**

**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 setting;
- 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 reflexive 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.

**Assessment** 3 hour examination: 60% Written assignment [1500 words]: 40%.
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

**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.

**Required Reading**

**Recommended Reading**

**Class Contact**
Block clinical placement of 120 hours

**Assessment**

- Clinical Assessment Tool & clinical learning objectives: Satisfactory/ Unsatisfactory
- 3 Reflective Journals: Satisfactory/Unsatisfactory
- 3 hour examination: 60% Essay [1500 words]: 40%.

**HN7310 MIDWIFERY STUDIES 5 CHILDBEARING COMPLICATIONS**

**Campus St Albans**

**Prerequisites**

**Learning Outcomes**
- Students will be expected to:
  - Use 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.

**HN7311 MIDWIFE PRAC 5 CHILDBEARING COMPLICATION**

**Campus St Albans**

**Prerequisites**

**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;  
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.  
Required Reading  
Class Contact  
Block clinical placement of 208 hours  
Assessment  
FACULTY OF HEALTH, ENGINEERING AND SCIENCE

Childbearing Journey, HNM 7204 & HNM 7311 Midwifery Practice 3 & 5: Childbearing Complications

Learning Outcomes Students will be expected to:
- Describe the development of a baby during the second half of pregnancy;
- Demonstrate understanding of the circumstances that may 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%.

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 environment of the nursery and implement strategies to promote the wellbeing of the baby and family;
- Develop competency within the context of the multidisciplinary Health Care team;
- Utilise a clinical decision making process to apply the necessary knowledge and understanding required to meet the needs of the baby and family in the nursery;
- Apply strategies for maintaining the families' need for privacy, dignity and respect, as well as their right to be informed and to make decision regarding care of their baby;
- Facilitate family involvement with the care of the baby with special needs;
- Employ reflective practice and implement evidence based care for babies and their families;
- Facilitate transition of the baby and family from hospital to home;
- Apply evidence-based knowledge to midwifery practice with the sick baby;
- Document the ongoing relationship with woman and her family that the midwifery student follows through in a way that reflects their own involvement and actions and the rationale for these, as well as the families’ actions and attitudes and responses to midwifery care; and
- Follow through of a ‘sick’ baby,
- ContentNeonatal Nursery Environment
- Cots
- Oxygen saturation equipment
- Assisted ventilation equipment
- Monitors
- Stress management strategies
- Care of the Baby
- Gestational, physical & psychosocial assessment
- Facilitation of growth & development
- Touch/stimulation/position
- Rest
- Comfort /pain control
- Kangaroo care
- Resuscitation
- Oxygenation /Oxygen therapy/CPAP/Surfactant therapy
- Oxygen saturation/Blood gases
- Nutrition & elimination
- Breast feeding – expand on previous knowledge/ Breast milk substitutes
- Gastric feeds
- IV therapy/Fluid balance & electrolytes
- Specimen collections
- Phototherapy
- Immunity
- Universal precautions/Hygiene
- Neutral thermal environment


Class Contact Block clinical placement of 120 hours.
Assessment Practice assessment based on ANMC competencies:
Satisfactory/Unsatisfactory Drug Calculation Test: Satisfactory / Unsatisfactory
Clinical learning objectives and assessment: Satisfactory/Unsatisfactory 3 Reflective journals:
Satisfactory/Unsatisfactory

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 new borns;
- 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 at the level of midwifery practice;
- 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 Not applicable.


Class Contact  Block clinical placement of 208 hours

Assessment  Practice based assessment based on ANMC Competency Standards: Satisfactory Unsatisfactory 3 Reflective journals:Satisfactory/Unsatisfactory.

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, ethical 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


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
Prerequisites Nil
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.
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.
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%).

FACULTY OF HEALTH, ENGINEERING AND SCIENCE

HNNO006 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 26 days (8 hours per shift) and 4 days aged care (8 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 HNNO04 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.

HNNO501 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; musculo- and 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.
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.

HNO003 PHARMACOLOGY
Campus St Albans
Prerequisites Nil
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.
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.
Advanced practitioner in orthopaedic nursing. Students are expected to spend their clinical learning experience in a contract developed by the student in collaboration with a lecturer, and collaborative consultant in the health care team. Further, as per orthopaedic nurse practitioner: leader, manager, educator, researcher, in specialised orthopaedic nursing practice; role of the advanced entry to this subject is seen as unique and dynamic, this unit determines the clinical learning required to achieve expertise in clinical 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; principles and functions of Orthoses, and strategies in the management of distress parents, psychosocial and medical metabolic bone diseases.

Recommended Reading

Assessment
Written contract of the clinical learning experience.
Further topics include: principles of teaching and learning; 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

Subject Hours
Thirty-nine hours per semester.

Recommended Reading
cultural aspects; ethical and legal responsibility; communication and pain management in paediatric nursing.

**Required Reading**


**Recommended Reading**


**Subject Hours**

- Thirty-nine hours for one semester.

**Assessment**

- Clinical project: 30% (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.

**HNP5003 PAEDIATRIC NURSING STUDIES 3**

**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 in a related area but outside their current clinical practice, to further expand their expertise in clinical learning experiences. To achieve expertise and skills as an advanced practitioner in paediatric nursing.

**Required Reading**


**Recommended Reading**


**Subject Hours**

- Seven hours of seminar work and 32 hours clinical learning experience.

**Assessment**

- Contract with supervisor: Hurdle requirement ungraded.
- Twelve hour seminar and one hour tutorial per week for one semester.

**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%), and one 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/pharmacological interventions will be examined alongside the range of psychological, social 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.

**Recommended Reading**


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 the skills and knowledge related to 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.

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%; 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 added, with specific focus on Motivational Interviewing. This subject has an emphasis on practical competencies for the student.

Required Reading: To be advised by lecturer.


Subject Hours: Three hours per week for one semester.

Assessment: 2500 word assignment, 60%; presentation based on core skills, 40%.

JAC0216 WITH WOMAN: RETHINKING PAIN

(CONSORTIUM SUBJECT)

For continuing students only

Campus: Distance Education

Prerequisite(s): Nil.

Corequisite(s): HNM2010 Practice Allegiances;

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.


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: 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.

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: pre-term; 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.
CENTRE FOR ENVIRONMENTAL SAFETY AND RISK ENGINEERING

Below are details of undergraduate and postgraduate courses offered by the Centre for Environmental Safety and Risk Engineering in 2007. 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 (I)
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>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>Year 1</td>
<td>VQB5611</td>
<td>RISK ASSESSMENT AND HUMAN BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5621</td>
<td>FIRE GROWTH, DETECTION AND EXTINGUISHMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5632</td>
<td>SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5642</td>
<td>PERFORMANCE CODES METHODOLOGY AND STRUCTURE</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Year 2</td>
<td>VQB5751</td>
<td>FIRE TECHNOLOGY MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5761</td>
<td>FIRE SAFETY SYSTEMS MODELLING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5772</td>
<td>FIRE SAFETY SYSTEM DESIGN</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td></td>
<td>VQB5782</td>
<td>FIRE SPREAD AND FIRE SAFETY SYSTEM DESIGN PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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) (I)
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

| Year  | Semester | Course Code | Course Title                                      | Credit Points | EFTSL | SC Band | Pre 2005 From 2005 Full Fee |
|-------|----------|-------------|--------------------------------------------------|---------------|-------|---------|----------------|-----------------|
| Year 1| Semester One| VQB5611   | RISK ASSESSMENT AND HUMAN BEHAVIOUR                | 12            | 0.1250| 2       | $712          | $890            | $1,584         |
|       | Semester One| VQB5621   | FIRE GROWTH, DETECTION AND EXTINGUISHMENT          | 12            | 0.1250| 2       | $712          | $890            | $1,584         |
|       | Semester Two| VQB5632   | SMOKE AND FIRE SPREAD, FIRE SAFETY SYSTEM DESIGN  | 12            | 0.1250| 2       | $712          | $890            | $1,584         |
|       | Semester Two| VQB5642   | PERFORMANCE CODES METHODOLOGY AND STRUCTURE        | 12            | 0.1250| 2       | $712          | $890            | $1,584         |
| Year 2| Semester One| VQT5790   | INDUSTRIAL EXPERIENCE (FULL TIME)                  | 12            | 0.5000| 2       | $2,847        | $3,559          | $6,336         |
|       | Semester One| VQT5791   | INDUSTRIAL EXPERIENCE (PART TIME)                  | 12            | 0.2500| 2       | $1,424        | $1,780          | $3,168         |
DOCTOR OF PHILOSOPHY

Course Code: EPHC, EPLC, EPOT

Course Structure

<table>
<thead>
<tr>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From</th>
<th>Pre 2005 From</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
</tr>
<tr>
<td>VQT8001 RESEARCH THESIS 1 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>VQT8002 RESEARCH THESIS 2 FULL TIME</td>
<td>48</td>
<td>0.5000</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
</tr>
<tr>
<td>VQT8011 RESEARCH THESIS 1 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</td>
</tr>
<tr>
<td>VQT8012 RESEARCH THESIS 2 PART TIME</td>
<td>24</td>
<td>0.2500</td>
<td>2</td>
<td>$1,424</td>
<td>$1,780</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 persons 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.

Assessment
Assessment 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 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

VQB5611 RISK ASSESSMENT AND HUMAN BEHAVIOUR

Campus Werribee
Prerequisite(s) Nil


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. The subject covers: Conceptual framework of performance regulations; life safety, illness and injury, health, safety and amenity and asset protection. Historical background, ISO6241, NKB, international approaches, NZ model, equivalency concept. State legislation and the model building act (administrative framework). The Performance Based Code of Australia and Australian Standards (technical framework). Process and procedural matters; legal issues, documentation, joint and several tortfeasor liability. Integrated approvals; impact of performance regulation on other approvals. Fire Code Reform Centre (FCRC) overview and submodels. Risk management and assessment, an overview. Other PBCCA performance designs. Through life performance and maintenance. Essential services recognition and documentation. Quality assurance and the building permit/inspection process.

FACULTY OF HEALTH, ENGINEERING AND SCIENCE


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, VQB5621 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.

VQB5782 FIRE SPREAD AND FIRE SAFETY SYSTEM DESIGN PROJECT
Campus Werribee
Prerequisite(s) Fire Spread and Fire Safety System Design Project.
Co-requisite(s) VQB5772 Fire Safety System Design.
Content The first part of this subject provides an understanding of the mechanisms of and impediments to the spread of fire in buildings, and to provide a knowledge of the behaviour, analysis and design of the available subsystems for the management of fire spread. The subject covers: introduction and overview; reliability of smoke and fire management subsystems; mechanisms, timing and probability of fire spread; modelling fire spread; fire spread management subsystem; design of fire spread subsystem. In the second part of the subject Fire Safety System design project will apply knowledge gained during the course to the analysis and design of a cost-effective fire safety system for a proposed building project.

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
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.


**Class Contact** Regular contact will be made by arrangement with the supervisor.

**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 and resources required 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 Centre or the University and will not include the supervisors. Students may be asked to present themselves for oral or written examination by these examiners, at the examiner's discretion.

**VQT6060 BUILDING FIRE RESEARCH (PART 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.


**Class Contact** Regular contact will be made by arrangement with the supervisor.

**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 and resources required 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 Centre or the University and will not include the supervisors. Students may be asked to present themselves for oral or written examination by these examiners, at the examiner's discretion.

**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/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:


**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/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:


**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/ResearchhandResearchTraining/MajorResearchAreas/ Assessment criteria and Core Research Graduate Attributes can be found on the Office for Postgraduate Research website at the following link:

CENTRE FOR TELECOMMUNICATIONS AND MICRO-ELECTRONICS

SUBJECTS

Below are subject details for courses offered by the Centre for Telecommunications and Micro-Electronics in 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University's searchable online courses database at www.vu.edu.au/courses

JRM6012 SEMICONDUCTOR DEVICE PHYSICS
Campus Chipskills Partner Universities
Prerequisite(s) Nil.


Recommended Reading Sze, S., 1997, Modern Semiconductor Device Physics, J. Wiley.

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%.

JRM6013 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%.
OFFICE HEALTH, ENGINEERING AND SCIENCE

Below are details of undergraduate and postgraduate courses offered by the Office Health, Engineering and Science in 2007. 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 ARTS/BACHELOR OF SCIENCE (I)
Course Code: ABPS

Course Objectives
The combined Bachelor of Science/Bachelor of Arts course will prepare professionally trained scientists to take their place in industrial and government employment; enhance the professional scientific skills with LOTE and cultural studies; and produce graduates capable of performing their professional functions in a culturally diverse setting.

Course Duration
Four years of full-time study.

Course Structure
Subject to approval.

BACHELOR OF BUSINESS ELECTRONIC COMMERCE/BACHELOR OF SCIENCE (I)
Course Code: BBES

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 both the appropriate field of science and of business. The double degree course will equip graduates to obtain employment in business and government, in major scientific organizations and elsewhere. It was improve learning by providing a fundamental framework for the application of business and scientific concepts and ideas and their co-integration which will ensure that students are capable of engaging successfully in these professional areas in a commercial environment.

Course Duration
The course is offered over four years on a full-time basis or part-time equivalent. All undergraduate degree subjects carry a value of 12 credit points. If undertaking Co-operative Education, additional credit points is required for graduation.

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 band score of 6-7 subject to individual profile; or
• Test of English as a Foreign Language – score of 550, plus a Test of Written English – score of 5.

Course Structure
Subject to approval.

BACHELOR OF SCIENCE/BACHELOR OF LAWS (I)
Course Code: BLBS

Course Objectives
The combined Bachelor of Science/Bachelor of Laws 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 science. The double degree course will equip graduates to obtain employment in law, business and government, in major scientific organisations, at the Bar and elsewhere.

Course Duration
Five years of full-time study.

Course Structure
Subject to approval.

BACHELOR OF ENGINEERING/BACHELOR OF ARTS (I)
Course Code: EBEA

Campus: Footscray Park

Course Description
The double degree structure of the Bachelor of Engineering/ Bachelor of Arts integrates education, training and research. With the increasing globalisation of industry, Australia's close proximity to Asia and the increasing reliance on technology and in particular multimedia, there is need for professionally qualified engineers to be offered the opportunity to be exposed to international studies and develop more skills in the field of multimedia communications. The course will give students access to a broad curriculum and to a program, which transcends disciplinary boundaries.

Course Objectives
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 Duration
The course is offered over 5 years on a full-time basis or part-time equivalent.

Course Structure
Students are advised to contact the Course Coordinator to discuss Units of Study selection.

BACHELOR OF ENGINEERING/BACHELOR OF BUSINESS ELECTRONIC COMMERCE (I)
Course Code: EEBE

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 organizations.
Course Duration
The course is offered over five years on a full-time basis or part-time equivalent. All undergraduate degree subjects carry a value of 12 credit points.

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 band score of 6-7 subject to individual profile; or
- Test of English as a Foreign Language – score of 550, plus a Test of Written English – score of 5.

Course Structure
Subject to approval.

BACHELOR OF ENGINEERING/BACHELOR OF SCIENCE (I)
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.

Course Structure
Subject to approval.

BACHELOR OF ENGINEERING/BACHELOR OF LAWS
Course Code: EBBL

Course Objectives
The combined Bachelor of Engineering/Bachelor of Laws 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 double degree course will equip graduates to obtain employment in law, business and government, in major engineering organisations, at the Bar and elsewhere.

Course Duration
Six years of full-time study.

Course Structure
Subject to approval.

MASTERS QUALIFYING PROGRAM (I)
Course Code: ENMQ

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 in to 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 area 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.
To remedy this situation, the Faculty of Health, Engineering and Science provides a year-long Foundation Studies program.

The beginners stream is designed for students that would like to pursue a tertiary qualification in a science, computing or an engineering discipline but:

3. whose recent educational results have not been at the level of which they are capable of performing;
4. who are returning to study after some years away from formal education; or
5. who wish to change direction in their education.

The Foundation Studies program aims to provide an opportunity for students:

1. who have not studied science and mathematics at Year 12 level;
2. 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;
3. whose recent educational results have not been at the level of which they are capable of performing;
4. who are returning to study after some years away from formal education; or
5. 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.

---

**CERTIFICATE IN FOUNDATION STUDIES (ENGINEERING AND SCIENCE) (I)**

**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:

1. who have not studied science and mathematics at Year 12 level;
2. 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;
3. whose recent educational results have not been at the level of which they are capable of performing;
4. who are returning to study after some years away from formal education; or
5. who wish to change direction in their education.
Intermediate Stream
The intermediate stream is designed for students that would like to pursue a tertiary qualification in a science, computing or an engineering discipline but have not been successful in completing or meeting the pass requirements of related subject areas previously undertaken. 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 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.

Bachelor of Science/Bachelor of Psychology
Double Degree
Course Code: SBSP
CRICOS No: 047051A
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
Course structure for Psychology/Biomedical Sciences

<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 From 2005</th>
<th>Full Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
<td>(AUS)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMB1518 HUMAN PHYSIOLOGY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td></td>
<td>RMB1514 FUNCTIONAL ANATOMY 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td></td>
<td>APP1012 PSYCHOLOGY 1A</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td></td>
<td>AXF1001 KNOWING AND KNOWLEDGE A</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td></td>
<td>RMB1528 HUMAN PHYSIOLOGY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td></td>
<td>RMB1524 FUNCTIONAL ANATOMY 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
</tr>
<tr>
<td></td>
<td>APP1013 PSYCHOLOGY 1B</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
</tr>
<tr>
<td></td>
<td>AXF1002 KNOWING AND KNOWLEDGE B</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</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.
### Year 3

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Credit Point</th>
<th>EFTSL</th>
<th>SC Band</th>
<th>Pre 2005 From 2005</th>
<th>From 2005</th>
<th>Full Fee (AU$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS2030 QUALITATIVE SOCIAL RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP3035 RESEARCH METHODS IN PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM2560 MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</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>RBM2800 CARDIORESPIRATORY AND RENAL PHYSIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP3037 CLINICAL ASPECTS OF PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM3610 BIOMEDICAL SCIENCE, ETHICS AND VALUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Psychology Elective = to 12 credit points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 4</td>
<td></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>
<td></td>
</tr>
<tr>
<td>Two x 3rd Year Biomedical Science Units = 12 credit points each</td>
<td></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>
<td></td>
</tr>
<tr>
<td>APP3036 HISTORY AND THEORIES IN PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP2023 INTERPERSONAL SKILLS 2</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM3910 PROJECT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>One 3rd Year Biomedical Science Unit – 12 credit points</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two x Psychology Elective = 12 credit points each</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other electives as available – can include first year units 1 or 2 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semester 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM2260 DIET AND NUTRITION</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM2560 MEDICAL BIOCHEMISTRY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>or APP3035 RESEARCH METHODS IN PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APS2030 QUALITATIVE SOCIAL RESEARCH METHODS</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>RBM2800 CARDIORESPIRATORY AND RENAL PHYSIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3610 BIOMEDICAL SCIENCE, ETHICS AND VALUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>or RBF2330 CELL BIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>APP3037 CLINICAL ASPECTS OF PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3036 HISTORY AND THEORIES IN PSYCHOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3023 PSYCHOLOGICAL ISSUES IN THE WORKPLACE</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>Third year Biomedical Sciences unit 7 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third year Biomedical Sciences unit 8 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology elective 8 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology elective 8 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third year Biomedical Science units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RBM3264 ADVANCED NERVE AND MUSCLE PHYSIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3550 GROWTH AND EARLY DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3590 ADVANCED EXPERIMENTAL TECHNIQUES</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3720 IMMUNOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3810 WELLNESS 1</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3540 GROWTH, DEVELOPMENT AND AGING</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3680 HUMAN DEVELOPMENTAL AND CLINICAL GENETICS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3800 PHARMACOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3820 WELLNESS 2</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3650 ADVANCED REPRODUCTION AND DEVELOPMENT</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RBM3960 NUTRITIONAL FRONTIERS</td>
<td>12</td>
<td>0.1250</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>Other electives 1 or 2 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychology elective unit options</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APP3015 COUNSELLING THEORY AND PRACTICE</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3016 GROUP BEHAVIOUR</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3018 ORGANISATIONS AND WORK</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3019 PSYCHOBIOLOGY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3020 PSYCHOANALYSIS</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3021 PSYCHOLOGY OF ADJUSTMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>APP3025 PSYCHOLOGICAL ASSESSMENT</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>Arts elective units that can be substituted for Knowing and Knowledge in first year (These are all at St Albans Campus).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACC1047 CULTURE AND COMMUNICATION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACC1048 MEDIA, CULTURE AND SOCIETY</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACL1001 READING CONTEMPORARY FICTION</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACL1002 STUDYING POETRY AND POETICS</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACP1053 INTRODUCTION TO CREATIVE WRITING</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACP1054 INTRODUCTION TO MEDIA WRITING</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACW1020 SEX AND GENDER</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ACW1021 FASHIONING GENDER</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ASS1012 SOCIOLOGY 1A – INTRODUCTION TO AUSTRALIAN SOCIETY AND CULTURES</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
<tr>
<td>ASS1013 SOCIOLOGY 1B ISSUES IN AUSTRALIAN SOCIETY AND CULTURE</td>
<td>12</td>
<td>0.1250</td>
<td>1</td>
<td>$500</td>
<td>$625</td>
<td>$1,430</td>
</tr>
</tbody>
</table>
SUBJECTS
Below are subject details for courses offered by the Office Health, Engineering and Science in 2007.

IMPORTANT NOTE: Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University’s searchable online courses database at www.vu.edu.au/courses

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 other first year, 12 credit point units of study 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 first year, 12 credit point 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 other first year, 12 credit point units of study 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 first year, 6 credit point 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 other first year, 6 credit point units of study 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 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 first year, 6 credit point 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 other first year, 6 credit point units of study 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
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 first 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 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, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.

HES0006 DIRECTED STUDIES 2D
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 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, 12 credit point units of study offered by the Faculty of Health, Engineering and Science.

HES0008 DIRECTED STUDIES 2F
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 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, 12 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 use 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**

**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**

**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**

**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, 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, third year units of study offered by the Faculty of Health, Engineering and Science.

**Recommended Reading**

**JCB0101 BIOLOGY 1**

**Campus**
Footscray Park

**Prerequisites**
Nil.

**Co-requisites**

**Learning Outcomes**

**Content**
Content Biological Organisation, Macromolecules and Fundamental 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/Exocytosis, 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**


**Class Contact** 86 hours over the semester accounts for a mixture of lectures, tutorials and laboratory classes.

**Assessment**

**JCB0111 CHEMISTRY 1**

**Campus** Footscray Park

**Prerequisites** Nil.

**Co-requisites**


**JCB0112 CHEMISTRY 2**

**Campus** Footscray Park

**Prerequisites** JCB0111 Chemistry 1 or equivalent

column on retention times and base line separation. Column instillation and programming of ramping programs.

Required Reading


Class Contact 30 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

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 JCM0101 Information Technology 1; or equivalent

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 GraphPad Prism or SIGMA PLOT, Chem Draw Pro, Introduction to MathWork’s MATLAB, Thomson ResearchSoft’ s EndNote, Macromedia Director, Robotic Programming, MDSolids, Adobe Premier or alternative media authoring program. Students must complete four units to be eligible to complete JCM0102. Below is a guideline as to the units required for particular study pathways: Engineering: Introduction to MathWork’s MATLAB, MDSolids, GraphPad Prism or SIGMA PLOT, Thomson ResearchSoft’ s EndNote. Science/Health Science: Macromedia Director, GraphPad Prism or SIGMA PLOT, ChemDraw, Thomson ResearchSoft’ s EndNote.

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.

Co-requisites

Content Numeracy; Advance Arithmetic and Fractions; Ratios, Percentages and Proportions; SI Units and Scientific Notations Mathematical Notations; Number Systems (Reals, Integers, etc); Domain and Range; Continuity; Functions and Relations; Basic Set Theory; Boolean Algebra Algebra; Basic Algebra; Binomial Expansion Theorem; Indices and Logarithms and their application to Science/Engineering Graphing for Engineers: Linear Equations; Conic Sections; Trigonometric Functions; Graphing for Scientists: Linear Equations; Quadratic Equations; Trigonometric Functions Introductory Calculus: Limits; Differentiation; Anti-Differentiation and Integration Applications involving Calculus: Tangents and Normal Lines; Approximation; Curve Sketching (Cubic Functions); Maximum/Minimum Problems; Rates of Change.

Students must complete four units to be eligible to complete JCM0112. Below is a guideline as to the units required for particular study pathways:

Engineering: Algebra, Graphing for Engineers, Introductory Calculus, Applications involving Calculus.

Science/Health Science (Mathematical): Algebra, Mathematical Notation, Graphing for Scientists, Introductory Calculus.

Science/Health Science (Non Mathematical): Numeracy, Mathematical Notation, Algebra, Graphing for Scientists.

Required Reading Nil.

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

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%.

JHL0110 ENGLISH LANGUAGE AND COMMUNICATIONS SKILLS

Campus Footscray Park

Prerequisites Nil.

Co-requisites

Content Communications skills that encompass synthesis, summatising, 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.

Required Reading

Recommended Reading


Class Contact 52 hours over the semester accounts for a mixture of tutorials, workshops and computer classes.

Assessment Exam comprises 50%, Problem based/Community based Projects comprise 20%, Assignments comprise 15%, Professor Science Show comprises 15%, All aspects of the course are required to be passed.

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,
Required Reading

JSP0103 PHYSICS 2
Campus Footscray Park
Prerequisites JSP0102 or equivalent

Co-requisites

Content
Rotational Kinematics and Energy: Angular position and acceleration, rotational kinematics; connections between linear and rotational quantities, rolling motion, inertia, and conservation of energy. Rotational Dynamics and Static Equilibrium; Torque, angular acceleration and torque, centre of mass and balance; dynamical applications of torque, angular momentum, conservation of angular momentum, rotational work. Gravity: Newton's Law of Universal Gravitation. Gravitational attraction of spherical bodies: Gravitational potential energy; Energy conservation, Oscillations about equilibrium. Periodic motion; simple harmonic motion; uniform and simple harmonic motion connections, Energy conservation are oscillatory motion, damped oscillations, resonance. Waves and sound, wave types, waves on a string, harmonic wave functions, sound waves, sound intensity, Doppler effect, superposition and interference, standing waves, beats. Light and Sound: Reflection, refraction. Total internal reflection. Mirrors. Lenses and image formation. Waves on a string, sound waves, speed of sound, intensity and sound level, Doppler effect. Shock waves. Light as a wave, superposition, standing waves, interference and diffraction, polarisation. Electricity: Electrostatic charge, electric field, electric potential, dc circuits, Ohm's law, series and parallel resistors, Kirchoff's law, ac circuits, series and parallel capacitors, inductors. Continuation of statics. Fluids and Elasticity.

Required 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.

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.

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.

VDS8200 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, and will explore, at an advanced level, a range of qualitative and quantitative methodologies.

Required Reading Dependent on students area of professional expertise.

VDS8210 PROFESSIONAL STUDIES 2 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.

**Recommended Reading** Dependent on students area of professional expertise.

**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.

**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.

**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.

**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.

**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%.
PACKAGING AND POLYMER RESEARCH UNIT

Below are details of undergraduate and postgraduate courses offered by the Packaging and Polymer Research Unit in 2007. 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

<table>
<thead>
<tr>
<th>Course Name</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>RPK6001 DEVELOPMENT OF PACKAGING SYSTEMS</td>
<td>12</td>
<td>0.167</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RPK6002 MARKETING RESEARCH</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6003 COSTING METHODOLOGIES AND IMPACTS</td>
<td>12</td>
<td>0.083</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>RPK6004 INVESTMENT/CAPITAL ANALYSIS AND BUDGETING</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6005 QUALITY ASSURANCE AND MANAGEMENT</td>
<td>12</td>
<td>0.083</td>
<td>2</td>
<td>$473</td>
<td>$591</td>
<td>$1,052</td>
</tr>
<tr>
<td>RPK6006 OPERATIONAL STRATEGIES</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6007 BUSINESS AND MARKETING STRATEGY</td>
<td>12</td>
<td>0.125</td>
<td>2</td>
<td>$712</td>
<td>$890</td>
<td>$1,584</td>
</tr>
<tr>
<td>RPK6008 PACKAGING STRATEGY DEVELOPMENT AND IMPLEMENTATION</td>
<td>12</td>
<td>0.167</td>
<td>2</td>
<td>$951</td>
<td>$1,189</td>
<td>$2,116</td>
</tr>
<tr>
<td>RPK6009 DEVELOPMENT PROJECT/MINOR THESIS (OFFSHORE)</td>
<td>12</td>
<td>0.500</td>
<td>2</td>
<td>$2,847</td>
<td>$3,559</td>
<td>$6,336</td>
</tr>
</tbody>
</table>
**SUBJECTS**

Below are subject details for courses offered by the Packaging and Polymer Research Unit in 2007.

**IMPORTANT NOTE:** Not all subjects for courses offered by the school are listed below because some subjects are offered by another school within the faculty or are offered by a different faculty. For details of these subjects, please refer to other schools within this handbook, other Victoria University faculty handbooks or to Victoria University's searchable online courses database at www.vu.edu.au/courses

---

**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.  

**Recommended Reading** Course Handbook provided to each student.  
**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 the need to create seamlessness in transport services and operations that span complex networks involving different modes and many interface points – depots, terminals, warehouses, ports, for example. It recognises that intermodal efficiency may not be easily achieved; and that action may be required on many fronts – including operational capacity matching, alliance formation, information and e-Business streamlining, rationalising chain structures, eliminating market structure inefficiency and harmonising policies and policy frameworks. Particular attention is paid to capacity measurement, provision and adjustment in freight networks; to efficiency costs and pricing frameworks; to ways and means of achieving efficient chain and supply chain structures; and to overcoming policy and regulatory constraints. This subject draws heavily not only on the Australian freight industry but also on international experience.  

**Required Reading** Course Handbook provided to each student.  
**Class Contact** Forty-five hours of block mode teaching.  
**Assessment** Case study and seminar presentation, 10%; Syndicate group project, 40%; Research report, 50%.  

---

**VPM5002 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%.  

---

**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 add further to the students’ understanding of process mapping, the design of static and dynamic KPls and dynamic modelling solutions for efficient chains.  

**Recommended 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%.  

---
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: