Bachelor of Applied Science / Bachelor of Business (IX31)

Year offered: 2011
Admissions: Yes
CRICOS code: 042263G
Course duration (full-time): 4 years
Domestic Fees (indicative): 2011: CSP $3,358 per semester (indicative)
International Fees (indicative): 2011: $11,000 (indicative) per semester
Domestic Entry: February
International Entry: February
QTAC code: 419832
Past rank cut-off: 81
Past OP cut-off: 10
OP Guarantee: Yes
Assumed knowledge: English (4, SA) and Maths B (4, SA)
Preparatory studies: For information on acquiring assumed knowledge visit http://www.qut.edu.au/assumed-knowledge
Total credit points: 384
Standard credit points per full-time semester: 48
Course coordinator: Dr Perry Hartfield (Science and Technology); Director of Undergraduate Studies, QUT Business School; email: bus@qut.edu.au
Discipline coordinator: Ms Sherrena Buckby (Accountancy); ASPRO Gayle Kerr (Advertising); Dr Tommy Tang (Economics); Dr John Chen (Finance); Mr Greg Southey (Human Resource Management); Mr Michael Cox (International Business); Dr Henri Burgers (Management); Mr Bill Proud (Marketing); and Ms Amisha Mehta (Public Relations); Science Discipline Coordinator details are listed under further information.
Campus: Gardens Point

Overview

Through the combination of science and business, you will equip yourself for an exciting career at the cutting edge of scientific innovation within a range of public, private and non-profit industries. Your business degree will give you a broad base of commercial knowledge as well as the opportunity to major in a specific business area. This understanding of business makes you more attractive to employers, even if you wish to work predominantly in a science-based career.

Professional Recognition

Business component: Students may be eligible for membership to a number of professional bodies depending on choice of major and unit selection. Details on professional recognition can be found under the individual majors of the Bachelor of Business (BS05).

Important Information for Business Students

QUT Business School rules and procedures are outlined in the Business Undergraduate Guidelines booklet. Other useful information can be found on the Student Services website.

Limits on grades of 3

A new policy concerning grades of 3 came into effect from 1 January 2009 (QUT MOPP C/5.2). With effect from this date grades of 3 are no longer considered a conceded or low pass but are classified as a fail grade. Any grades of 3 awarded prior to 1 January 2009 retain the conceded pass status and will be counted for graduation purposes up to the maximum number of grades of 3 permitted for your course. Grades of 3 incurred in units that commence after 1 January 2009 will not count towards your degree. Further information is available on the Student Services website.

Further Information

For further information about this course, please contact the following:

Science Coordinator
Dr Perry Hartfield
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Email: p.hartfield@qut.edu.au

Business Coordinator
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Email: bus@qut.edu.au

Science Discipline Coordinators

Biochemistry
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Email: m.bateson@qut.edu.au

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Email: j.mcmurtrie@qut.edu.au

Ecology
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Email: i.williamson@qut.edu.au
### Environmental Science
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### Forensic Science
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Email: e.kiriakous@qut.edu.au

### Geoscience
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Email: g.huftile@qut.edu.au

### Microbiology
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Phone: +61 7 3138 2304  
Email: c.knox@qut.edu.au

### Physics
Dr Greg Michael  
Phone: +61 7 3138 1584  
Email: g.michael@qut.edu.au

## Full Time Course structure

### Year 1 Semester 1
- Business School Core Unit
- Business School Core Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 1 Semester 2
- Business School Core Unit
- Business School Core Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 2 Semester 1
- Business School Core Unit
- Business School Core Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 2 Semester 2
- Business School Core Unit
- Business School Major Unit

### Year 3 Semester 1
- Business School Major Unit
- Business School Major Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 3 Semester 2
- Business School Major Unit
- Business School Major Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 4 Semester 1
- Business School Major Unit
- Business School Major Unit
- Science Faculty Unit
- Science Faculty Unit

### Year 4 Semester 2
- Business School Major Unit
- Business School Major Unit
- Science Faculty Unit
- Science Faculty Unit

### Accountancy Major

### Year 1 Semester 1
- BSB110 Accounting
- BSB115 Management

### Year 1 Semester 2
- BSB124 Working in Business
- BSB126 Marketing

### Year 2 Semester 1
- BSB111 Business Law and Ethics
- BSB113 Economics

### Year 2 Semester 2
- AYB200 Financial Accounting
- AYB225 Management Accounting

### Year 3 Semester 1
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<tr>
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<td>EFB337</td>
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**Remaining Business Core Units**

Students must complete both remaining Business School Core Units

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**Finance Major**

**Year 1 Semester 1**

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**Year 1 Semester 2**

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**Year 2 Semester 1**

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**Year 3 Semester 2**

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**Year 4 Semester 1**

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<tr>
<td>MGB339</td>
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**Year 4 Semester 2**

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<td>MGB370</td>
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**International Business Major**

**Year 1 Semester 1**

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**Year 1 Semester 2**

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**Year 2 Semester 1**

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**Year 2 Semester 2**

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**Year 3 Semester 1**

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### Management Major

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<tbody>
<tr>
<td>BSB113 Economics</td>
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### Marketing Major

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### Public Relations Major

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<td>MGB225 Intercultural Communication and Negotiation Skills</td>
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<tr>
<th>Year 4 Semester 1</th>
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<tbody>
<tr>
<td>MGB309 Strategic Management</td>
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<tr>
<td>MGB324 Managing Business Growth</td>
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<tr>
<th>Year 4 Semester 2</th>
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<tbody>
<tr>
<td>MGB309 Strategic Management</td>
</tr>
<tr>
<td>MGB324 Managing Business Growth</td>
</tr>
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</table>
### Year 2 Semester 1
- BSB113 Economics
- BSB124 Working in Business

### Year 2 Semester 2
- AMB263 Introduction To Public Relations
- AMB264 Public Relations Techniques

### Year 3 Semester 1
- AMB201 Marketing and Audience Research
- BSB111 Business Law and Ethics

### Year 3 Semester 2
- AMB372 Public Relations Planning
- AMB373 Corporate Communication

### Year 4 Semester 1
- AMB374 Global Public Relations Cases
- AMB375 Public Relations Management

### Year 4 Semester 2
- AMB379 Public Relations Campaigns
- MGB223 Entrepreneurship and Innovation

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### Course structure - Major in Biochemistry

#### Year 1, Semester 1
- SCB111 Chemistry 1
- SCB112 Cellular Basis of Life

#### Year 1, Semester 2 (Life Sciences Pre-Major Strand)
- SCB120 Plant and Animal Physiology
- SCB121 Chemistry 2

#### Year 2, Semester 1
- SCB110 Science Concepts and Global Systems
  - Plus either:
    - MAB101 Statistical Data Analysis 1
    - Or
    - MAB105 Preparatory Mathematics

#### Year 2, Semester 2
- SCB122 Cell and Molecular Biology
- SCB123 Physical Science Applications

#### Year 3, Semester 1
- LQB381 Biochemistry: Structure and Function
- LQB383 Molecular and Cellular Regulation

#### Year 3, Semester 2
- LQB481 Biochemical Pathways and Metabolism
- LQB483 Molecular Biology Techniques

#### Year 4, Semester 1
- LQB581 Functional Biochemistry
- LQB582 Biomedical Research Technologies

#### Year 4, Semester 2
- LQB681 Biochemical Research Skills
- LQB682 Protein Biochemistry and Bioengineering

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### Course structure - Major in Biotechnology

#### Year 1, Semester 1
- SCB111 Chemistry 1
- SCB112 Cellular Basis of Life

#### Year 1, Semester 2 (Life Sciences Pre-Major Strand)
- SCB120 Plant and Animal Physiology
- SCB121 Chemistry 2

#### Year 2, Semester 1
- SCB110 Science Concepts and Global Systems
  - Plus either:
    - MAB101 Statistical Data Analysis 1
    - Or
    - MAB105 Preparatory Mathematics

#### Year 2, Semester 2
- SCB122 Cell and Molecular Biology
- SCB123 Physical Science Applications

#### Year 3, Semester 1
- LQB381 Biochemistry: Structure and Function
- LQB383 Molecular and Cellular Regulation

#### Year 3, Semester 2
- LQB483 Molecular Biology Techniques
- LQB484 Introduction to Genomics and Bioinformatics

#### Year 4, Semester 1
- LQB583 Genetic Research Technology
  - TWO units selected from:
<table>
<thead>
<tr>
<th>Course structure - Major in Chemistry</th>
<th>Course structure - Major in Ecology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1, Semester 1</td>
<td>Year 1, Semester 1</td>
</tr>
<tr>
<td>SCB111 Chemical 1</td>
<td>SCB111 Chemistry 1</td>
</tr>
<tr>
<td>Plus either:</td>
<td>SCB112 Cellular Basis of Life</td>
</tr>
<tr>
<td>MAB101 Statistical Data Analysis 1</td>
<td>SCB112 Cellular Basis of Life</td>
</tr>
<tr>
<td>Or</td>
<td>SCB120 Plant and Animal Physiology</td>
</tr>
<tr>
<td>MAB105 Preparatory Mathematics</td>
<td>SCB122 Cell and Molecular Biology</td>
</tr>
<tr>
<td>Year 1, Semester 2 (Chemistry Pre-Major Strand)</td>
<td>SCB120 Plant and Animal Physiology</td>
</tr>
<tr>
<td>SCB112 Cellular Basis of Life</td>
<td>SCB122 Cell and Molecular Biology</td>
</tr>
<tr>
<td>SCB121 Chemistry 2</td>
<td>SCB122 Cell and Molecular Biology</td>
</tr>
<tr>
<td>Year 2, Semester 1</td>
<td>Year 2, Semester 1</td>
</tr>
<tr>
<td>MAB120 Algebra and Calculus</td>
<td>MAB120 Algebra and Calculus</td>
</tr>
<tr>
<td>SCB110 Science Concepts and Global Systems</td>
<td>SCB110 Science Concepts and Global Systems</td>
</tr>
<tr>
<td>Year 2, Semester 2</td>
<td>Year 2, Semester 2</td>
</tr>
<tr>
<td>SCB123 Physical Science Applications</td>
<td>SCB123 Physical Science Applications</td>
</tr>
<tr>
<td>SCB131 Experimental Chemistry</td>
<td>SCB131 Experimental Chemistry</td>
</tr>
<tr>
<td>Year 3, Semester 1</td>
<td>Year 3, Semester 1</td>
</tr>
<tr>
<td>PQB312 Analytical Chemistry For Scientists and Technologists</td>
<td>NQB302 Earth Surface Systems</td>
</tr>
<tr>
<td>PQB331 Structure and Bonding</td>
<td>NQB312 Ecology</td>
</tr>
<tr>
<td>Year 3, Semester 2</td>
<td>Year 3, Semester 2</td>
</tr>
<tr>
<td>PQB401 Reaction Kinetics, Thermodynamics and Mechanisms</td>
<td>NQB421 Experimental Design</td>
</tr>
<tr>
<td>PQB442 Chemical Spectroscopy</td>
<td>NQB422 Genetics and Evolution</td>
</tr>
<tr>
<td>Year 4, Semester 1</td>
<td>Year 4, Semester 1</td>
</tr>
<tr>
<td>PQB502 Advanced Physical Chemistry</td>
<td>PQB502 Population Genetics and Molecular Ecology</td>
</tr>
<tr>
<td>PQB531 Organic Mechanisms and Synthesis</td>
<td>PQB521 Population Management</td>
</tr>
<tr>
<td>Year 4, Semester 2</td>
<td>Year 4, Semester 2</td>
</tr>
<tr>
<td>PQB631 Advanced Inorganic Chemistry</td>
<td>PQB622 Conservation Biology</td>
</tr>
<tr>
<td>PQB642 Chemical Research</td>
<td>PQB623 Ecological Systems</td>
</tr>
</tbody>
</table>

Course structure - Major in Environmental Science

<p>| Year 1, Semester 1                           | Year 1, Semester 1                                              |
| SCB111 Chemistry 1                           | SCB111 Chemistry 1                                              |
| SCB112 Cellular Basis of Life               | SCB112 Cellular Basis of Life                                    |
| Year 1, Semester 2 (Ecology and Environmental Science Pre-Major Strand) | SCB120 Plant and Animal Physiology                              |
| SCB122 Cell and Molecular Biology           | SCB122 Cell and Molecular Biology                                |
| Year 2, Semester 1                           | Year 2, Semester 1                                              |
| SCB123 Physical Science Applications        | SCB123 Physical Science Applications                              |
| SCB131 Experimental Chemistry               | SCB131 Experimental Chemistry                                     |
| Year 3, Semester 1                           | Year 3, Semester 1                                              |
| PQB312 Analytical Chemistry For Scientists and Technologists | NQB302 Earth Surface Systems                                      |
| PQB331 Structure and Bonding                | NQB312 Ecology                                                    |
| Year 3, Semester 2                           | Year 3, Semester 2                                              |
| PQB401 Reaction Kinetics, Thermodynamics and Mechanisms | NQB421 Experimental Design                                       |
| PQB442 Chemical Spectroscopy                | NQB422 Genetics and Evolution                                     |
| Year 4, Semester 1                           | Year 4, Semester 1                                              |
| PQB502 Advanced Physical Chemistry          | PQB502 Population Genetics and Molecular Ecology                  |
| PQB531 Organic Mechanisms and Synthesis     | PQB521 Population Management                                      |
| Year 4, Semester 2                           | Year 4, Semester 2                                              |
| PQB631 Advanced Inorganic Chemistry         | PQB622 Conservation Biology                                       |
| PQB642 Chemical Research                     | PQB623 Ecological Systems                                         |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCB120</td>
<td>Plant and Animal Physiology</td>
</tr>
<tr>
<td>SCB121</td>
<td>Chemistry 2</td>
</tr>
</tbody>
</table>

**Year 2, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SCB110</td>
<td>Science Concepts and Global Systems</td>
</tr>
<tr>
<td>MAB101</td>
<td>Statistical Data Analysis 1</td>
</tr>
<tr>
<td>MAB105</td>
<td>Preparatory Mathematics</td>
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</tbody>
</table>

**Year 2, Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>NQB202</td>
<td>History of Life on Earth</td>
</tr>
<tr>
<td>SCB123</td>
<td>Physical Science Applications</td>
</tr>
</tbody>
</table>

**Year 3, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>LQB383</td>
<td>Molecular and Cellular Regulation</td>
</tr>
<tr>
<td>SCB384</td>
<td>Forensic Sciences - From Crime Scene to Court</td>
</tr>
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</table>

**Year 3, Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JSB979</td>
<td>Forensic Scientific Evidence</td>
</tr>
<tr>
<td>PQB312</td>
<td>Analytical Chemistry For Scientists and Technologists</td>
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</table>

**Year 4, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PQB513</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>PQB584</td>
<td>Forensic Physical Evidence</td>
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</table>

**Year 4, Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>LQB680</td>
<td>Forensic DNA Profiling</td>
</tr>
<tr>
<td>PQB684</td>
<td>Forensic Analysis</td>
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</tbody>
</table>

**Course structure - Major in Forensic Science**

**Year 1, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCB111</td>
<td>Chemistry 1</td>
</tr>
<tr>
<td>SCB112</td>
<td>Cellular Basis of Life</td>
</tr>
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</table>

**Year 1, Semester 2 (Forensic Science Pre-Major Strand)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>SCB121</td>
<td>Chemistry 2</td>
</tr>
<tr>
<td>SCB122</td>
<td>Cell and Molecular Biology</td>
</tr>
</tbody>
</table>

**Year 2, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>SCB110</td>
<td>Science Concepts and Global Systems</td>
</tr>
<tr>
<td>MAB101</td>
<td>Statistical Data Analysis 1</td>
</tr>
<tr>
<td>MAB105</td>
<td>Preparatory Mathematics</td>
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</tbody>
</table>

**Year 2, Semester 2**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NQB202</td>
<td>History of Life on Earth</td>
</tr>
<tr>
<td>SCB222</td>
<td>Exploration of the Universe</td>
</tr>
</tbody>
</table>

**Year 3, Semester 1**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>NQB311</td>
<td>Mineralogy</td>
</tr>
<tr>
<td>NQB314</td>
<td>Sedimentary Geology</td>
</tr>
</tbody>
</table>
Year 3, Semester 2
NQB411 Petrology of Igneous and Metamorphic Rocks
NQB412 Structural Geology and Field Methods

Year 4, Semester 1
NQB502 Field Methods in Natural Resource Sciences
NQB513 Geophysics

Year 4, Semester 2
NQB613 Plate Tectonics
NQB615 Geochemistry

Course structure - Major in Microbiology

Year 1, Semester 1
SCB111 Chemistry 1
SCB112 Cellular Basis of Life

Year 1, Semester 2 (Life Sciences Pre-Major Strand)
SCB120 Plant and Animal Physiology
SCB121 Chemistry 2

Year 2, Semester 1
SCB110 Science Concepts and Global Systems
Plus either:
MAB101 Statistical Data Analysis 1
Or
MAB105 Preparatory Mathematics

Year 2, Semester 2
SCB122 Cell and Molecular Biology
SCB123 Physical Science Applications

Year 3, Semester 1
LQB381 Biochemistry: Structure and Function
LQB386 Microbial Structure and Function

Year 3, Semester 2
LQB483 Molecular Biology Techniques
LQB486 Clinical Microbiology 1

Year 4, Semester 1
LQB586 Clinical Microbiology 2
LQB587 Applied Microbiology 1: Water, Air and Soil

Year 4, Semester 2
LQB686 Microbial Technology and Immunology
LQB687 Applied Microbiology 2: Food and Quality Assurance

Course structure - Major in Physics

Year 1, Semester 1
MAB121 Calculus and Differential Equations
Or
SCB111 Chemistry 1
MAB120 Algebra and Calculus
Students who have completed only Maths B are required to take MAB120. Students who have completed both Maths B and Maths C should take MAB121.

Year 1, Semester 2 (Physics Pre-Major Strand)
MAB122 Algebra and Analytic Geometry
PQB250 Mechanics and Electromagnetism

Year 2, Semester 1
SCB110 Science Concepts and Global Systems
SCB112 Cellular Basis of Life

Year 2, Semester 2
MAB220 Computational Mathematics 1
Or
MAB121 Calculus and Differential Equations
PQB251 Waves and Optics

Year 3, Semester 1
MAB311 Advanced Calculus
PQB350 Thermodynamics of Solids and Gases

Year 3, Semester 2
PQB450 Energy, Fields and Radiation
PQB451 Electronics and Instrumentation

Year 4, Semester 1
PQB550 Quantum and Condensed Matter Physics
PQB551 Physical Analytical Techniques

Year 4, Semester 2
PQB650 Advanced Theoretical Physics
PQB651 Experimental Physics

Potential Careers:
UNIT SYNOPSES

AMB200 CONSUMER BEHAVIOUR

This unit provides students with the fundamental theories and models to develop a sound understanding of consumers, their needs, and behaviours. It provides a detailed examination of the consumer decision process and the internal and external influences on this core decision process. The unit also assists students in applying this knowledge to the development, implementation and evaluation of marketing activities within an organisation.

Prerequisites: BSB126 or CTB126 or BSB116 or BSB117
Antirequisites: MIB204
Equivalents: AMX200, CTB200
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

AMB201 MARKETING AND AUDIENCE RESEARCH

This unit provides an introduction to the conduct and evaluation of marketing and audience research across the disciplines of advertising, marketing and public relations. Class members explore how field studies, survey and experimental research are employed to support advertising, marketing and public relations information needs. The unit provides an overview of research process, research design, methods of data collection and analysis, and the development of research proposals to support decision-making. Class members also explore issues related to research on media audiences, research ethics, and the management of client briefings.

Prerequisites: BSB126, CTB126, BSB116, or BSB117

Antirequisites: MIB305, MGB220, COB334
Equivalents: AMX201, CTB201
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point and Caboolture
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

AMB202 INTEGRATED MARKETING COMMUNICATION

In past decades many organisations separated the different forms of marketing communication that convey their corporate and marketing messages. They developed separate plans for their advertising, public relations, direct marketing, personal selling and sales promotion with separate goals, objectives, strategies and budgets. Today many companies recognise the concept of integrated marketing communication which integrates these different functions along with other aspects of the marketing mix that communicate with stakeholders and customers. Integrated marketing communication requires a “total” approach to planning marketing communication programs and coordinating communication strategies in support of overall brand and product/service marketing objectives.

Prerequisites: BSB126 or CTB126 or BSB116 or BSB117
Antirequisites: COB207, MIB309
Equivalents: AMX202
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point and Caboolture
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB210 IMPORTING AND EXPORTING

Trade has become fundamental to the survival and growth of many businesses in Australia as well as other economies. International business students need an understanding of the many challenges entailed in the management of trade. Import and export practice is an applied, technical and detailed examination of the consumer decision process and the internal and external influences on this core decision process. The unit also assists students in applying this knowledge to the development, implementation and evaluation of marketing activities within an organisation.

Prerequisites: BSB119 or CTB119
Equivalents: AMX210, IBB210
Credit points: 12
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB220 ADVERTISING THEORY AND PRACTICE

This unit serves as an introduction to later units in the advertising major and gives learners an overview of the advertising industry and the management of the advertising function. The unit traverses the interrelationship of the institutions of advertising, the advertisers, the advertising agencies and the media. It introduces research and details methods of determining advertising objectives, budgets, establishing target audiences, interpreting audience ratings.
and circulation figures, and enables learners to gain a preliminary understanding of the creative functions of the advertising industry. It also shows the ethical and legal side of advertising and its important role in society and the economy.

**Prerequisites:** BSB126, CTB126, BSB116, or BSB117  
**Antirequisites:** COB308  
**Equivalents:** AMX220  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB240 MARKETING PLANNING AND MANAGEMENT

This unit extends the student’s knowledge of the fundamental marketing concepts and theories introduced in the Faculty Core unit in Marketing, by adding further breadth and depth of knowledge of marketing and developing skills in the application of this knowledge to marketing planning and management within the business environment. Emphasis is on the role of the marketing manager at the product management level in undertaking analysis, planning, implementation and control of marketing activities.

**Prerequisites:** BSB126 or CTB126  
**Equivalents:** AMX240, CTB240  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB263 INTRODUCTION TO PUBLIC RELATIONS

This unit introduces students to the theory and practice of public relations, the discipline that deals with the creation, maintenance, and enhancement of relationships between organisations and their publics. Topics covered include publicity, events, and public opinion. This unit may be taken concurrently with AMB264 Public Relations Techniques especially by students undertaking a public relations major. However, it may also be taken by those students doing a public relations minor, or as a stand alone unit by those students in a wide variety of study disciplines who wish to understand more about this important area of business.

**Prerequisites:** BSB126, CTB126, BSB116, or BSB117  
**Equivalents:** AMB260, AMX263  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB264 PUBLIC RELATIONS TECHNIQUES

This unit offers an introduction to the main tactics and techniques used in public relations. Topics covered include the development of message strategies as well as a specialised focus on the production of examples of a variety of written public relations genres such as brochures, speeches, and media releases. This unit may be taken concurrently with AMB263 Introduction to Public Relations especially by students undertaking a public relations major. However, it may also be taken by those students doing a public relations minor, or as a stand alone unit by those students in a wide variety of study disciplines who wish to improve and enhance their communication skills.

**Prerequisites:** BSB126, CTB126, BSB116, or BSB117  
**Antirequisites:** AMB261, AMB262  
**Equivalents:** AMX264  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB303 INTERNATIONAL LOGISTICS

This unit examines international logistics through the concepts of international distribution channels and international supply chain management. Strategy in managing international logistical constraints is emphasised with practical studies of contemporary international supply chain management in international industries. Traditional costs and financial aspects of supply chain management are considered. Contemporary issues are incorporated including: the impact of e-business on international logistics; the evolution of new technologies for ‘smart’ packaging, warehousing and international stock control; the combination of international services with goods products; recent technological developments in international transportation and product quality control.

**Prerequisites:** AMB210, IBB210, AMB240, or CTB240  
**Equivalents:** AMX303, IBB303  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB318 ADVERTISING COPYWRITING

There are two parts to any copywriting process the thinking and the writing. In the first part, students learn to solve advertising problems through an understanding of the prospect and the product and the formulation of incisive creative strategy. In the second part, creative thinking techniques are applied and advertising concepts emerge from the creative strategy. Students’ thinking and writing skills are refined in weekly workshops and culminate in a group project.

**Prerequisites:** AMB220 or COB308  
**Equivalents:** AMB221, AMX318  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### AMB319 MEDIA PLANNING

This unit introduces the qualitative and quantitative factors affecting media selection and use by advertisers. It covers the costing and scheduling of media, market targeting, measuring media exposure, media comparisons and trends. In-depth analysis of advertising media will allow learners to develop an understanding of the characteristics of each. The application of the concepts of media decision making, media strategy and research to the development of a media plan are emphasised.

**Prerequisites:** AMB220  
**Equivalents:** AMB222, AMX319  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2
AMB320 ADVERTISING MANAGEMENT
This unit takes the perspective of the Advertising Manager and addresses the use of research in developing, implementing, managing, and assessing a successful advertising campaign. In Advertising Management, learners use the case method of learning to examine the advertising process from its place in the marketing mix to the formulation of objectives, strategy and budget to the development of creative and media tactics and their ongoing evaluation. In addition, issues that impinge upon the advertising campaign management process such as legal and ethical issues, globalisation and the client-agency relationship are discussed.
Prerequisites: (AMB318 or AMB221) and (AMB319 or AMB222)
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB330 ADVERTISING PLANNING PORTFOLIO
This advanced unit builds on the theoretical perspectives and applied skills introduced to students in copywriting, media and advertising management. It explores important issues such as the contribution of research to the creation of advertising; the hierarchical development of strategy from marketing and IMC strategy through to advertising, media and creative strategy; the role of the strategic planner in advertising; the use of planning to deliver more effective advertising solutions. Using problem-based learning, students establish benchmarks to evaluate advertising, develop advertising briefs and devise strategies for on-time and on-budget process management.
Prerequisites: AMB318 or AMB221, and AMB319 or AMB222
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB335 E-MARKETING STRATEGIES
E-Business and mobile commerce technologies have emerged as defining technologies for companies in the 21st century. This unit focuses on e-marketing applications and strategies and the marketer's role in developing solutions that integrate new and old economies. Drawing on their knowledge of marketing principles, students will examine the diverse applications of technology in product and service design; product distribution/service delivery and logistics; promotional strategies and other marketing components. The unit also explores the role of emerging electronic models and the use of e-marketing strategies to achieve global competitive advantage.
Prerequisites: AMB240 or CTB240, and AMB201 or CTB201
Credit points: 12
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB336 INTERNATIONAL MARKETING
The aim of this unit is to provide students with a thorough understanding of the multiplicity of issues that impact on the development of international marketing strategies and plans and their operational implementation. The unit is highly applied and provides students with the following opportunities: to analyse global international firms, their marketing strategies and various international marketing issues in a variety of geographic and industry contexts; to evaluate methodologies and new practices for handling problems and issues typical of global and international markets and competition; to develop an operationally sound international marketing plan.
Prerequisites: AMB240, CTB240, AMB210, or IBB210
Credit points: 12
Campus: Gardens Point and Caboolture
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

AMB339 ADVERTISING CAMPAIGNS
This capstone advertising unit draws from all the theoretical, analytical, and applied material developed throughout the advertising major, and applies it to a client brief. Learners develop advertising solutions that incorporate all aspects of an advertising campaign, including objectives, budgeting, message development, message delivery, and measurement. The key emphasis is on the use of research to develop sound advertising strategy, which is then executed as creative and media ideas and evaluated through ongoing benchmarks.
Prerequisites: AMB320 and AMB330
Credit points: 12
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB340 SERVICES MARKETING
This unit explores the special characteristics of services that distinguish the marketing of services from goods. Topics include: the distinctive aspects of consumer decision-making relative to services and the implications for marketing strategy formation; the management of demand and supply; customer services and its influence on service satisfaction; service quality management and measurement; internationalisation of the service sector and distribution modes for services that reflect the significant impacts of new technologies on service delivery.
Prerequisites: AMB240 or CTB240, and AMB201 or CTB201
Credit points: 12
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AMB359 STRATEGIC MARKETING
Emphasis of the capstone Marketing unit is on the role of marketing manager at the corporate and strategic business...
unit/division levels. Students are exposed to a variety of strategic marketing techniques and issues, and learn how to apply these in corporate planning and management. Topics include: developing and critiquing strategic marketing planning models; recognising the importance of market focus; determining what marketing strategy can realistically be accomplished for a business; identifying underlying factors that must be considered in developing marketing strategy for a market-oriented organisation; discussing problems in successful implementation of marketing strategy; and organising for successful strategy implementation.

**Prerequisites:** AMB340, and AMB335 or AMB241  
**Equivalents:** AMB341, AMX359  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB369 INTERNATIONAL BUSINESS STRATEGY**  
'This unit focuses on the definition and implementation of corporate strategy for worldwide operations. As the capstone unit in the International Business Major, it is designed to build upon the knowledge base of previous units, introducing you to the strategic management of firms, and engage you in the strategic choices which international managers face in the international environment.'

**Prerequisites:** AMB336, AMB303, IBB303, or IBB213  
**Equivalents:** AMX369, IBB300  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB372 PUBLIC RELATIONS PLANNING**  
This unit introduces students to the public relations planning process. Students build skills in planning by analysing the components, execution and evaluation of contemporary public relations campaigns. The public relations planning process, partnered with theoretical concepts and ethical considerations, is examined across practice contexts and areas.

**Prerequisites:** ((AMB263 or AMB260) and AMB264)) or (AMB261 and AMB262)  
**Equivalents:** AMX372  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB373 CORPORATE COMMUNICATION**  
Corporate Communication provides students with the opportunity to build on and apply their understanding of public relations to an in-house corporate role. Students gain an overview of an organisation relevant to the practice of public relations at a senior level in organisations by investigating internal communication processes, corporate reputation, corporate social responsibility, organisational culture and change and issues and crisis management.

**Prerequisites:** (AMB263 or AMB260 and AMB264) or (AMB261 and AMB262)  
**Equivalents:** AMB360, AMX373  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB374 GLOBAL PUBLIC RELATIONS CASES**  
Global Public Relations Cases will apply the theoretical underpinnings of generic practice to specialist areas. Exposure to real-world global situations and public relations responses will improve students' familiarity with the public relations discipline's practice and strengthen students' decision-making and critical thinking skills.

**Prerequisites:** AMB372, AMB261, or AMB262  
**Equivalents:** AMB370, AMX374  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB375 PUBLIC RELATIONS MANAGEMENT**  
This unit develops student skills in the analysis of public relations public relations programs in line with corporate strategy, integrating long term planning with issue assessment and response. Students extend analytical, interpretive and management skills in the public relations role.

**Prerequisites:** AMB372 and AMB373, or AMB360  
**Equivalents:** AMX375  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AMB379 PUBLIC RELATIONS CAMPAIGNS**  
As the capstone unit, Public Relations Campaigns sees the student bring together the design, strategic planning and tactical preparation that underpins an effective public relations campaign. Students research, develop and present their plans for a real world client, enhancing their portfolio prior to graduation.

**Prerequisites:** AMB374 or AMB370, and AMB201 or CTB201  
**Equivalents:** AMB361, AMX379  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**AYB200 FINANCIAL ACCOUNTING**  
Financial Accounting examines of the accounting concepts and procedures relevant to both partnership and corporate structures within the context of the accounting profession's conceptual framework and the relevant accounting standards and Corporations Law requirements. Topics include: the formation, operation, financial reporting and disclosure for both partnerships and companies; accounting for leases; and the professional role of accountants. The emphasis is on the effect of the different forms of ownership on the financial statements.

**Prerequisites:** BSB110 or CTB110  
**Equivalents:** AYB121, AYX200  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM
AYB219 TAXATION LAW
This unit introduces students to the statutory framework of the Australian taxation system. Elements in the determination of taxable income and the levy of income tax are examined including general and specific categories of assessable income and allowable deductions, capital gains tax and administration aspects of the tax system. The taxation of fringe benefits is also examined. The unit concludes with a brief overview of the taxation of partnerships, trusts and companies and the goods and services tax. Emphasis is placed on developing students' skills in problem solving through research and analysis of taxation issues.

Prerequisites: BSB111 or CTB111
Antirequisites: LWB364
Equivalents: AYB325, AYX219
Credit points: 12
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AYB227 INTERNATIONAL ACCOUNTING
International Accounting is designed to provide students with an insight into, and an appreciation of, many of the accounting problems and issues faced in an international business environment. Issues examined include: comparative international accounting systems and practices; cultural influences on accounting; international financial reporting issues such as international business combinations, intangibles, foreign currency transactions and translation, comparative international analysis of financial statements; and global accounting issues in the twenty-first century. The unit also examines the impact of international harmonization of accounting standards on multinational corporations and the investment communities worldwide.

Prerequisites: BSB110 or CTB110, and BSB119 or CTB119
Equivalents: AYX227
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AYB221 COMPUTERISED ACCOUNTING SYSTEMS
This unit provides an examination of the concepts, processes and issues relevant to computerised accounting systems including: accounting information systems; internal controls; design and development of computerised accounting systems including general ledger and reporting cycle, revenue cycle, expenditure cycle and payroll cycle; computer fraud, security and crime; accessing accounting information; and accounting in an electronic environment. Practical application of these concepts is enhanced by the use of accounting software such as MYOB, spreadsheet software such as Excel, database software such as Access, and interactive multimedia software such as Accounting Information Systems Cycles.

Prerequisites: BSB110 or CTB110
Antirequisites: AYN443
Equivalents: AYX221
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AYB225 MANAGEMENT ACCOUNTING
This unit introduces students to accounting systems and techniques that provide management at all levels with information for use in planning, controlling and decision making. This can be contrasted with financial accounting, which provides summary financial information principally for external users (ie shareholders, creditors, banks, etc). Emphasis is placed on developing a range of accounting systems (in particular product costing) which may be used in manufacturing firms, although the principles and concepts used to develop such systems can be adapted to service organisations.

Prerequisites: BSB110 or CTB110
Equivalents: AYX225
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

AYB301 AUDIT AND ASSURANCE
This unit enables students to comprehend the key concepts of auditing as a discipline, to demonstrate the relationship between auditing and the systems of accountability and to demonstrate the differences between manual and EDI audit processes. The unit builds on the knowledge of accounting and accounting standards acquired in prior units by enabling students to understand in detail the audit process (including professional auditing standards and techniques) which leads to the auditor providing an opinion on the financial reports of various types of entities. Ethics and auditor's liability are also covered.

Prerequisites: (AYB221 or INB120) and (AYB340 or AYB220)
Equivalents: AYX301
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM
reporting framework including international harmonisation and the conceptual framework; definition, recognition and measurement of assets, liabilities, equity, revenues and expenses; asset revaluations; intangibles; leases and employee entitlements. Accounting in specific industries such as construction, extractive industries and superannuation funds is also examined. This unit complies with the new international accounting standards. Contracting theory is used.

**Prerequisites:** AYB340 or AYB220  
**Equivalents:** AYX311  
**Credit points:** 12  
**Contact hours:** 3.5 per week  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2  
**Campus:** Gardens Point

**BSB119 GLOBAL BUSINESS**

Information for future students  
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AYB321 STRATEGIC MANAGEMENT ACCOUNTING

Strategic management accounting develops a theory of organisations that provides an understanding of the information requirements of management to facilitate the strategic planning, decision-making and control necessary for the achievement of their objectives. Topics include: developing effective performance-evaluation systems and compensation plans; examining how managers can design organisations to motivate individuals to make choices that increase firm value; strategic planning and budgetary systems; pricing and product mix decisions; managing transfer-pricing disputes among divisions; developing an understanding of new management accounting practices, including activity-based costing (ABC), the balanced scorecard (BSC), and economic value added (EVA); and appreciating the research on the benefits and problems with ABC, BSC and EVA.

**Prerequisites:** AYB225  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2  
**Campus:** Gardens Point

AYB340 COMPANY ACCOUNTING

This unit includes: the preparation of consolidated financial statements; an overview of the statutory requirements that dictate the format and content of published financial reports of companies; the requirements of the Corporations Act 2001 and the major disclosure orientated accounting standards; accounting for income tax; accounting for the acquisition of assets (including entities); accounting for investments in associates; accounting for foreign currency transactions arising from international trading and financing; and the translation of the results of foreign operations.

**Prerequisites:** AYB200 or AYB121  
**Equivalents:** AYX340  
**Credit points:** 12  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2  
**Campus:** Gardens Point

BSB110 ACCOUNTING

Accounting data is the basis for decision making in any organisation. Accordingly, the aim of this unit is to provide students with a basic level of knowledge of modern financial and managerial accounting theory and practice so that they can understand how accounting data is used to help make decisions in organisations. The unit covers financial procedures and reporting for business entities, analysis and interpretation of financial statements and planning, control and business decision making.

**Antirequisites:** BSD110, CNB293, UDB342  
**Equivalents:** BSX110, CTB110  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM  
**Campus:** Gardens Point and Caboolture

BSB111 BUSINESS LAW AND ETHICS

This unit integrates the concepts and principles of business law with the theories and applications of business ethics. The unit makes extensive use of cases in law and ethics to develop knowledge and skills that enable students to analyse, apply and evaluate the legal principles and ethical decision-making processes relevant to modern business practice.

**Antirequisites:** AYB120, LWS009, LWB145  
**Equivalents:** BSX111, CTB111  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM  
**Campus:** Gardens Point and Caboolture

BSB113 ECONOMICS

This unit introduces students to the key economic concepts and their practical applications. It comprises twelve topics each focusing on a current economic issue. Microeconomic topics include demand and supply, elasticity, production and cost theory and market structure. Macroeconomic topics include measuring GDP, inflation and unemployment, money and banking, and fiscal and monetary policy.

**Antirequisites:** BSD113, UDB104  
**Equivalents:** BSX113, CTB113  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM  
**Campus:** Gardens Point and Caboolture

BSB115 MANAGEMENT

The unit provides an introduction to the theories and practice of management and organisations. Emphasis is on the conceptual and people skills that are needed in all areas of management and in all areas of organisational life. The unit acknowledges that organisations exist in an increasingly international environment where the emphasis will be on knowledge, the ability to learn, to change and to innovate. Organisations are viewed from individual, group, corporate and external environmental perspectives.

**Antirequisites:** BSD115  
**Equivalents:** BSX115, CTB115  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM  
**Campus:** Gardens Point and Caboolture

BSB119 GLOBAL BUSINESS
This unit examines the drivers of globalisation and the diversity of country markets at an introductory level. It develops the skills and understanding to identify and respond to the opportunities, challenges and risks of conducting business across politically, economically and culturally diverse environments. An authentic country feasibility study is undertaken to help identify where a firm can find opportunities both in terms of actual and potential markets and the location for value-adding activities. The unit aims for students to have developed a comprehension of the nature and role of globalisation and the drivers of international business, a. knowledge of the competitive forces and challenges confronting all business as a consequence of globalisation processes and an awareness of the additional knowledge and skills required of management to operate business internationally across a diversity of environments.

**Antirequisites:** BSB116, BSB112, BSD119  
**Equivalents:** BSX119, CTB119  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

### BSB124 WORKING IN BUSINESS

This unit will help you to kickstart your study and your career in business regardless of your specific discipline. Not only does “Working in Business” give you an understanding of where business has come from and where it is headed, but you will also gain insights into yourself and how you can develop as both a student and professional in the business world. It covers an overview of business, the important issues for working as a professional in an organisation, and also gives you the opportunity to reflect on your own skills, preferences and career options so you can plan a future that suits you.

**Antirequisites:** BSB114, CTB114, HHB113, BSD124  
**Equivalents:** BSX124  
**Credit points:** 12  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### BSB126 MARKETING

This introductory subject examines the role and importance of marketing to the contemporary organisation. Emphasis is placed on understanding the basic principles and practices of marketing such as the marketing concept, market segmentation, management information systems and consumer behaviour. The unit explores the various elements of the marketing mix, with special reference to product, price, distribution, and promotion, including advertising and public relations. By way of introduction only, key issues relating to services marketing, e-marketing and strategic marketing are also canvassed.

**Antirequisites:** BSB116, BSD126  
**Equivalents:** BSX126, CTB126  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

### EFB201 FINANCIAL MARKETS

This unit introduces students to the institutional structure of global financial markets, and thereby complements the understanding of theoretical finance gained in either BSB122 or EFB210. Topics covered include the functions of financial markets, the banking and payments system, financial system deregulation, non-bank financial institutions, stock exchange operations, debt markets, foreign exchange markets and markets for financial derivatives.

**Prerequisites:** BSB113 or CTB113  
**Equivalents:** EFX201  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### EFB210 FINANCE 1

This unit covers the following topics: an introduction to the financial institutional framework; an introduction to debt and equity instruments; financial mathematics applied to the pricing of debt and equity securities; a firm’s investment decision including Net Present Value (NPV) and Internal Rate of Return (IRR); introduction to risk and uncertainty using the Capital Asset Pricing Model (CAPM) and Weighted Average Cost of Capital (WACC) concept and risk management.

**Prerequisites:** BSB123 or BSB122 or MAB126 or (BSB110 and BSB113)  
**Equivalents:** EFX210  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

### EFB222 QUANTITATIVE METHODS FOR ECONOMICS AND FINANCE

This unit will provide students with the necessary background for advanced study in economics, econometrics and finance. It should also enable them to use basic mathematical and statistical techniques for economic and financial analysis and enable the confident and independent use of these skills. Students will be helped to understand the use of these techniques with reference to real world applications drawn from the fields of economics and finance.

**Prerequisites:** BSB122 or CTB122, or BSB123 or MAB101 or MAB233  
**Antirequisites:** EFB101  
**Equivalents:** EFX222  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### EFB223 ECONOMICS 2

Consumer behaviour, the role of the government in market intervention, allocative efficiency and market structure are some of the fundamental issues in microeconomics addressed in this unit. Business cycles and the related issue of macroeconomic stabilisation policy are analysed and
explained within the Australian context. The significance of foreign exchange markets, the Australian dollar and the terms of trade.

**Prerequisites:** BSB113 or CTB113 or UDB104  
**Equivalents:** EFB102, EFX223  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

### EFB240 FINANCE FOR INTERNATIONAL BUSINESS

In this unit students analyse the way international operations and performance of business can be put at risk by changing financial and regulatory conditions across borders and determine how best to manage the exposure to this risk. This unit examines the following: the evolution of the international financial system; the foreign exchange market; the types of foreign exchange rate exposures; managing exchange; translation and consolidation risks; assessing foreign direct investment targets; comparing the performance of foreign affiliates; operations exposure to regulatory risk of tax; investment and competition policy changes; country risk assessment and managing country risk exposure.

**Prerequisites:** (BSB119 or CTB119) or BSB116, and (BSB113 or CTB113) or (BSB122 or CTB122)  
**Antirequisites:** EFB312, MIB202  
**Equivalents:** EFX240, IBB202  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

### EFB307 FINANCE 2

This unit includes the following topics: the financing decision - capital structure, debt versus equity, lease versus debt, term structure versus default structure of interest rates; the dividend decision - dividends versus capital gains, franched versus unfranked income; firm valuation; free cash flow model; evaluation of takeovers; Risk and Return - diversification, the CAPM model, its practical application and its relationship to efficient market hypothesis; introduction to forwards, futures, options, warrants, convertibles and risk management using financial derivatives.

**Prerequisites:** EFB210  
**Equivalents:** EFX307  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### EFB312 INTERNATIONAL FINANCE

This unit examines the theory and practice of international finance, including the mechanics and uses of the spot, forward, swap, futures and options markets in foreign exchange; the relationship between domestic and international capital markets; interest rate and exchange rate determination; risk management of foreign exchange; international trade finance; evaluation of offshore investment.

**Prerequisites:** EFB210  
**Antirequisites:** EFB122, IBB202, EFB240  
**Equivalents:** EFX312  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

### EFB330 INTERMEDIATE MACROECONOMICS

This unit develops an analytical framework which can be used to understand and evaluate the macroeconomic performance of the Australian economy. It also provides extensive discussion of the monetary and fiscal policy approaches that are taken to maintain a sustainable economy with low inflation and low unemployment. Key issues addressed include unemployment, inflation, economic growth, saving and the balance of payments.

**Prerequisites:** EFB223 or EFB102  
**Equivalents:** EFB202, EFX330  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

### EFB331 INTERMEDIATE MICROECONOMICS

This unit is designed to develop students’ understanding of microeconomics and its applications at the intermediate level. More specifically, the theoretical and empirical content of this unit provides the basis for understanding the decisions and actions of consumers, firms and governments in modern economies. Furthermore, the unit provides an appreciation of the range of issues to which economics may usefully be applied to improve managerial decision-making and the formulation of public policy to improve the welfare of the community.

**Prerequisites:** EFB223 or EFB102  
**Equivalents:** EFB211, EFX331  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

### EFB332 APPLIED BEHAVIOURAL ECONOMICS

This unit is designed to expose students to current and practical applications of behavioural economics that can be used to improve the understanding of important topics in the area of sports, arts and entertainment. It uses an economic approach to explore topics such as superstardom, fakes, fads and herding behaviour, favouritism, awards and creativity, pressure, pay and performance, positional concerns or outcome uncertainty. The theories and methodological tools learned in this unit can also be applied to other economic areas and industries.

**Prerequisites:** EFB223 or EFB102  
**Equivalents:** EFX332  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

### EFB333 INTRODUCTORY ECONOMETRICS

Economics and finance graduates require some knowledge of econometrics to assist them in the application and testing of behavioural models and to provide quantitative forecasts for informed decision making. This unit aims to provide an introduction to a range of econometric techniques
appropriate for students studying economics and finance. The unit will provide an understanding of some core underlying theoretical issues essential for competent econometric modelling and then introduce students to a set of techniques tailored specifically to the needs of economics and finance students.

**Prerequisites:** EFB222 or EFB101  
**Antirequisites:** EFB200  
**Equivalents:** EFX333  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

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**EFB334 ENVIRONMENTAL ECONOMICS AND POLICY**

The unit introduces students to some of the current environmental and natural resource issues confronting society and how planners and decision-makers could better understand and address these problems using economics. This unit demonstrates that economics has a major role to play in helping us to understand and solve some of the environmental problems facing societies. It will be demonstrated that economics can often be used to help protect the environment rather than harm it. The unit would benefit those who wish to work either in the public or the private sector.

**Prerequisites:** EFB223 or EFB102  
**Equivalents:** EFX334  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

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**EFB335 INVESTMENTS**

This unit advances the students’ understanding of how investment decisions are made, what securities to invest in, how they fit in a portfolio, what is the impact of transaction costs, the risks associated with investing and performance evaluation of the investment process. This unit aims to provide students with an intermediate to advanced level of investment decision making skills which are essential for finance students in their personal and professional lives.

**Prerequisites:** EFB307  
**Antirequisites:** EFB318  
**Equivalents:** EFX335  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

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**EFB336 INTERNATIONAL ECONOMICS**

International economics advances student understanding of global markets and positions through theories and analyses of trade, intervention, currencies, current transactions, capital positions and obligations in an interdependent world. Through considerations of international positions and competitiveness the unit develops a framework for understanding of the prospects and challenges facing firms, organisations, institutions and governments active in the international economy and of the wider issues of global progress and stagnation.

**Prerequisites:** EFB330 or EFB202, and EFB331 or EFB211  
**Antirequisites:** EFB314  
**Equivalents:** EFX336  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

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**EFB337 GAME THEORY AND APPLICATIONS**

This unit presents the basic concepts of game theory and its application to economic phenomena, focussing on how individuals and firms deal with uncertainty and situations involving strategic interactions. The theoretical concepts are illustrated with applications from both the private and public sectors. Contents include the economics of uncertainty and information, asymmetric information, auctions, bargaining, markets and competition.

**Prerequisites:** EFB331 or EFB211  
**Equivalents:** EFX337  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

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**EFB338 CONTEMPORARY APPLICATION OF ECONOMIC THEORY**

EFB338 is a unit designed to summarize your studies in economics. The unit comprises usually of three or more topics of current research in economics. The topics cover micro and macro economics, trends in current theoretical, empirical and economic policy research. The unit is designed to develop your ability to summarise, evaluate and criticise research findings as well as to introduce you to how research in economics evolves to allow you to keep up with the progress made in economics after your degree.

**Prerequisites:** EFB222 or EFB101, EFB223 or EFB102, EFB330 or EFB202, and EFB331 or EFB211  
**Assumed knowledge:** This unit is the capstone unit for the Economics primary major and is designed to be completed in the final year of study.  
**Equivalents:** EFB329, EFX338  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

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**EFB340 FINANCE CAPSTONE**

This unit is designed to encompass the theory and knowledge gained in the entire Finance Major. The topics included in this unit are project evaluation, investment analysis, corporate valuation and advanced financial decision making. This unit aims to provide students with the forum to practice their finance skills in an applied setting which acts as a bridge between university studies and real-world employment in the financial services industry.

**Prerequisites:** EFB307 and EFB335. EFB335 can be enrolled in the same teaching period as EFB340.  
**Equivalents:** EFX340  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

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**JSB979 FORENSIC SCIENTIFIC EVIDENCE**

The word 'forensic' once meant anything relating to a law court. However today the term 'forensic science' refers to a whole new subject: it means using science to solve legal issues. As science, and the many sub-disciplines of science, are appearing in court with ever-increasing rapidly, there is a clear need for scientists to understand the
foundations to the law, the ways in which law reasons, the adversarial process, and the basics to the key area of evidence law. The aim of this unit is first to provide you with an understanding of evidence law, with a particular emphasis upon the foundations to reception of scientific evidence, and the ways in which expert scientific witnesses are received in our courts. The unit aims to clarify the links between science and law, as well as to articulate the differences between these two increasingly inter-twined disciplines.

Prerequisites: SCB112 and (SCB121 or SCB113)
Antirequisites: LSB328
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

LQB381 BIOCHEMISTRY: STRUCTURE AND FUNCTION
This unit extends basic organic chemistry theory to the level of the biological macromolecules. A clear understanding of the structure and function of these molecules is essential to a student’s understanding of the metabolism of living cells. Hence this biomolecular unit is a fundamental prerequisite for all advanced units in the various disciplines in the field of life sciences.

Prerequisites: (SCB121 and SCB122) or (SCB111 and SCB121) or SCB113
Antirequisites: LSB275 and LSB325 and LSB308
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

LQB383 MOLECULAR AND CELLULAR REGULATION
Molecular and Cellular Regulation is a second year unit and is a continuation and expansion of topics introduced in SCB112 Cellular Basis of Life and SCB122 Cell & Molecular Biology. Molecular and Cellular Regulation strengthens the focus on the molecular and genetic aspects of cellular processes and the consequences to the organism of failure of these basic processes. Topics taught relate to gene structure and regulation in prokaryotes and eukaryotes and the role of gene expression in the development of complex organisms. Related concepts such as cell signalling, communication, proliferation and survival are further developed in this unit.

Prerequisites: SCB122 or LSB238
Antirequisites: LSB468 and LSB338
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

LQB386 MICROBIAL STRUCTURE AND FUNCTION
Aspects of microbiology impinge upon many facets of daily life, for example, human health, genetic engineering, the food industry and the built and natural environment. The unit introduces you to and provides you with a solid foundation in the basic microbiology required for progression to advanced studies in Microbiology. This unit provides knowledge about safe handling and study of micro-organisms that is also very important in many other disciplines, because micro-organisms are used as models and tools in a wide range of study areas.

Prerequisites: SCB112 and (SCB121 or SCB113)
Antirequisites: LSB328
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

LQB481 BIOCHEMICAL PATHWAYS AND METABOLISM
The study of biochemistry and cell biology, along with molecular biology, provides students with the knowledge required for the proper understanding of the structure and function of living organisms at the molecular level. As such, this unit extends the studies begun in the unit LQB381 Biochemistry into the metabolic processes occurring in living cells, and provides students with a basis for further studies in biochemistry as well as support for other units in the third year of the course.

Prerequisites: LQB381 or LSB308
Corequisites: PUB405
Antirequisites: LSB275, LSB325, LSB408
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-2

LQB483 MOLECULAR BIOLOGY TECHNIQUES
Molecular biology and recombinant DNA technologies have important roles in many areas within the life sciences, including medicine, agriculture, cell biology, environmental science and forensics. Through close alignment of theoretical concepts and practical skills, this lab-based unit expands on molecular themes introduced in earlier cell and molecular biology units to develop expertise in modern recombinant DNA techniques and an understanding of strategies used to identify and manipulate genes. The close relationship between theory and practice in this unit is designed to develop competence, independence and critical thinking that will provide students with a solid foundation for advanced molecular biology studies presented in several third level units.

Prerequisites: LSB238 or SCB122
Antirequisites: LSB468, LSN468, LSN483
Assumed knowledge: LQB383 is recommended prior study
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-2

LQB484 INTRODUCTION TO GENOMICS AND BIOINFORMATICS
The completion of the Human Genome project, along with similar projects on other organisms of a prokaryote and eukaryote nature, marked the beginning of a major revolution in fundamental biology that changed our understanding of the natural world. To understand how information on genome structure-function relationships (ie bioinformatics) is being used in areas such as gene discovery, disease diagnosis and drug development, students need to understand how the information content of DNA and proteins is extracted and analysed. This unit
introduces students to the approaches to database mining and genome exploration.

Prerequisites: LQB383 or LSB338 or LSN101 and LSN102
Antirequisites: LSB537, LSB619, LSB469  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

LQB486 CLINICAL MICROBIOLOGY 1
Micro-organisms are very important as pathogens of humans and animals, and their accurate clinical diagnosis is essential for appropriate treatment and management of infections. This unit builds upon the foundational topics in microbiology that you learned in LQB386 (Microbial Structure and Function) and starts preparing you for a career in a microbiology laboratory in clinical practice, industry or research. The unit will advance your knowledge and skills in classical methods of isolation and identification of bacteria in clinical specimens and introduce aspects of microbial pathogenesis and antibiotic sensitivity. The unit will provide you with an understanding of clinically important viruses, and will commence your training in diagnostic parasitology.

Prerequisites: LQB386 or LSB328  Antirequisites: LSB435, LSB547  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

LQB581 FUNCTIONAL BIOCHEMISTRY
This unit will study advanced biochemical concepts with a focus on metabolism, signalling pathways, systems and networks that coordinate and regulate the functional behaviour of cells and tissues.

Prerequisites: (LQB381 or LSB308) and (LQB383 or LSB338)  Antirequisites: LSB508  Credit points: 12  Contact hours: 5 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

LQB582 BIOMEDICAL RESEARCH TECHNOLOGIES
This unit will study the technical principles and practical techniques that are essential for advancing research and development in biochemistry and biotechnology.

Prerequisites: LQB381 or LSB308  Antirequisites: LSB527  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

LQB583 GENETIC RESEARCH TECHNOLOGY
The tools available for the discovery and manipulation of new genes are increasing exponentially and, in turn, this is having a significant impact in many areas of the life sciences. The true potential for this ultimately relies on the ability to link genes and their function. There are many strategies, both targeted and global, which facilitate an understanding of gene and genome structure function relationships. These strategies rely on integrated technologies based on molecular genetics, molecular biology and genetic engineering. The identification of function leads then to unlimited potential for detection and manipulation of these genes in human, animal and plant systems.

Prerequisites: LQB483  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

LQB584 MEDICAL CELL BIOLOGY
This unit builds and extends the understanding of basic theoretical and practical aspects of molecular cell biology developed in previous cell and molecular biology units. Medical Cell Biology develops and extends the context of the cellular environment and its central role within the organism providing all of the biological functions required by the organism to survive, defend and protect itself from disease and trauma. An understanding of cell biology theory and molecular mechanisms of animal development and disease is essential for introduction to higher level units in medical biotechnology.

Prerequisites: LQB383 or LSB338  Antirequisites: LSB449, LSB503, LSN584  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

LQB585 PLANT GENETIC MANIPULATION
The potential of plant biotechnology can only be recognised as a result of the significant advances being made in technologies enabling the genetic manipulation of plants. Familiarity with the strategies, techniques and breadth of applications is essential as a basis for anyone planning a career in plant biotechnology. The unit is designed with a significant emphasis on achieving technical expertise in plant genetic manipulation and control of gene expression.

Prerequisites: LQB383 or LSB338  Antirequisites: LSB483  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1
LQB587 APPLIED MICROBIOLOGY 1: WATER, AIR AND SOIL

Issues relating to microbial populations within the environment are of great interest and relevance to the community, and also to scientists. Building on the foundation of basic microbiology, in this advanced level unit you will gain a strong understanding of the nature of microbial populations in water, air, and soil, and their importance to the human population. This unit is issue-based, encouraging a problem solving approach as you investigate/study microbial pollution, bioremediation, biogeochemical cycles and a healthy environment. You will gain knowledge and skills in analysis and interpretation of water, air and soil populations, which will permit you to investigate real-world problems.

Prerequisites: LQB386, LSB328, or LSB492
Antirequisites: LSB528
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

MAB101 STATISTICAL DATA ANALYSIS 1

Experiments, observational studies, sampling, and polls; data and variables; framework for describing and manipulating probability; independence; Binomial and Normal distributions; population parameters and sample statistics; concepts of estimation and inference; standard error; confidence intervals for means and proportions; tests of hypotheses on means and proportions (one sample and two independent samples); inference using tables of counts; modelling relationships using regression analysis; model diagnosis; use of statistical software.

Antirequisites: BSB123, EFB101, MAB141, MAN101, MAB233
Assumed knowledge: Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge.
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point

MAB105 PREPARATORY MATHEMATICS

This unit is intended to cater for the needs of students whose background in mathematics is either weak or does not reach the equivalent of Senior Mathematics B. It is intended to provide the concepts and skills needed for successful study of those units within the university which assume a background equivalent to Senior Mathematics B. This unit is incompatible with a grade of High Achievement in Senior Mathematics B. The aim of this unit is to develop your mathematical skills in and understanding of algebra, functions and graphing, differential and integral calculus of one variable and to interpret and solve simple, real world problems using these skills.
Assumed knowledge: Year 10 Level 6 Mathematics is assumed knowledge
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

MAB120 ALGEBRA AND CALCULUS

This unit introduces and reviews the elementary concepts of function, calculus, matrices and vectors with special reference to applications in science, technology and business where appropriate. Topics covered include the algebra of complex numbers, elementary functions (polynomial, trigonometric, exponential and logarithmic) and their properties, differentiation and integration methods and principles, geometric and algebraic applications of vectors and the solution of linear systems using matrices.

Antirequisites: MAN120
Assumed knowledge: Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge
Equivalents: MAB100, MAB125, MAB180
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

MAB121 CALCULUS AND DIFFERENTIAL EQUATIONS

Building upon the foundations established in MAB120 or Senior Maths C, this unit addresses the significant role of mathematical modelling using differential equations for the description and resolution of simple and complex problems relevant to real world situations. The formulation and solution of such problems is supported by advanced mathematical concepts used for function approximation, differentiation and integration. Undertaking this unit will allow you to develop your problem solving skills, especially in the context of advanced mathematical techniques applied to ordinary differential equations used to model real world problems. You will also gain a deeper understanding of the concepts of the derivative and the integral, and how these may be used in applied contexts.

Antirequisites: MAN112
Assumed knowledge: Grade of at least Sound Achievement in Senior Mathematics C (or equivalent) or MAB120 or MAB100 or MAB125
Equivalents: MAB111, MAB126, MAB131, MAB182
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

MAB122 ALGEBRA AND ANALYTIC GEOMETRY

Building upon the foundations established in MAB120 or Senior Maths C, this unit addresses the significant role of mathematical modelling using vectors, matrices and multivariable calculus for the description and resolution of simple and complex problems relevant in the real world. The formulation and solution of such problems is supported by appropriate advanced mathematical concepts used for function approximation, differentiation and integration. Undertaking this unit will allow you to develop your problem solving skills, especially in the context of advanced mathematical concepts used for function approximation, differentiation and integration.
mathematical techniques applied to vectors, matrices and multivariable functions used to model real world problems. **Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics C (or equivalent) or MAB120 or MAB100 or MAB125  **Equivalents:** MAB112, MAB127, MAB132  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1, 2011 SEM-2 and 2011 SUM

MGB220 COMPUTATIONAL MATHEMATICS 1

Many real world problems are not solvable analytically, meaning that it is necessary to develop computational methods that can be used to solve these problems. Additionally, to be able to apply these methods to large problems, they must be implemented as algorithms in a computer language such as MATLAB. This unit addresses both the theoretical development of computational methods and their implementation in MATLAB. The aim of this unit is to provide you with the introductory concepts, computational techniques and programming skills that will allow you to solve many real world problems. It is also designed to prepare you for study in the advanced units in computational mathematics.  **Antirequisites:** MAN220  **Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 and corequisite MAB120 or MAB125 or MAB100 or MAB180 if you don’t have Senior Mathematics C is assumed knowledge  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1 and 2011 SUM

MAB311 ADVANCED CALCULUS

This unit includes the following: polar coordinates; parametric equations; conic sections; quadric surfaces; vector-valued functions; Fourier series; functions of several variables; graphs; partial derivatives; total derivatives; extrema; Lagrange multipliers; Taylor series for multivariable functions; double and triple integrals; Green's theorems; line and surface integrals; divergence theorem; Stoke's theorem; applications.  **Prerequisites:** (MAB111 or MAB121) and (MAB112 or MAB122)  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1

MGB200 LEADING ORGANISATIONS

This unit introduces you to a range of perspectives in understanding human behaviour and its context within organisation structures. The unit also enables you to interpret, analyse, evaluate and explain conditions and consequences of work in organisations with a view to understanding and appreciating complex management issues in day to day experiences in business.  **Prerequisites:** BSB115 or CTB115  **Antirequisites:** MGB211, CTB211, MGB222, CTB232  **Equivalents:** MGX200  **Credit points:** 12  **Contact hours:** 3

MGB201 CONTEMPORARY EMPLOYMENT RELATIONS

This unit will develop your skills in understanding the effects of both domestic and international legal environments relating to employment relationships. This is important for developing practical, workable business strategies and HRM interventions.  **Prerequisites:** BSB115 or CTB115  **Equivalents:** MGX201  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1 and 2011 SEM-2

MGB207 HUMAN RESOURCE ISSUES AND STRATEGY

This unit provides a broad overview of the role and functions of human resource management (HRM) and explores the contribution of HRM to business performance and quality of work life. This unit gives you a foundation for professional practice in HRM and a practical introduction to the ways that organisations go about aligning the contributions of their people with business goals.  **Prerequisites:** BSB115 or CTB115  **Equivalents:** CTB207, MGX207  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1 and 2011 SEM-2

MGB210 MANAGING OPERATIONS

This unit extends general management approaches to the production operations subsystems of service and manufacturing organisations. The unit focuses on the deployment of productive resources in order to maximise the added value of services and products. Issues of quality and efficiency are considered analytically in terms of broader strategies and constraints. It considers the opportunities that new technology brings to operational strategies in both manufacturing and service. Project management principles are considered in relation to resource deployment and continuous improvement.  **Prerequisites:** BSB115 or CTB115  **Equivalents:** CTB234, MGX210  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point and Caboolture  **Teaching period:** 2011 SEM-1 and 2011 SEM-2

MGB220 BUSINESS RESEARCH METHODS

The unit will develop your understanding of business research methods so that you can undertake research into workplace issues and problems as well as being able to critically analyse the appropriateness of research findings for the real world.  **Prerequisites:** BSB123 or BSB122  **Antirequisites:** AMB201, CTB201  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1
MGB223 ENTREPRENEURSHIP AND INNOVATION
This unit introduces students to the nature and characteristics of entrepreneurship and innovation and explores the inter-relationship between the two within contemporary economies from a managerial perspective. Learning will be directed towards developing the theoretical and applied knowledge, skills, and attitudes that will support and enhance innovation and enterprise creation activity, through the development of a business plan. The unit is designed for those individuals interested in creating a new venture or working in industries as employees of venture owners or those that serve this sector. Students will have opportunity to build a comprehensive plan of their business concept.
Prerequisites: BSB115 or CTB115  Equivalent: CTB223, MGX223  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point and Caboolture  Teaching period: 2011 SEM-1 and 2011 SEM-2

MGB225 INTERCULTURAL COMMUNICATION AND NEGOTIATION SKILLS
The course develops students' abilities to identify and resolve problems in cross-cultural communication or negotiation situations where cultural differences have created misunderstandings or undesirable or unexpected outcomes. It first explores the concept of 'national culture' by considering the work of major theorists of cultural value dimensions - from Hall to Schwartz. Students are encouraged to analyse communication/negotiation process issues in terms of these value dimensions and to practise managing the process of communication/negotiation to improve their outcomes.
Prerequisites: BSB115, CTB115, BSB119 or BSB124  Antirequisites: MGB312  Equivalent: IBB205, MGX225  Credit points: 12  Contact hours: 3  Campus: Gardens Point and Caboolture  Teaching period: 2011 SEM-1 and 2011 SEM-2

MGB309 STRATEGIC MANAGEMENT
In this unit fundamental elements of strategy, which can be used in the decision making process, are placed in a framework that is developed within the particular context of Australia's economic development position. The emphasis is upon process and content issues that affect the strategic performance and positioning of the organisation. This involves creating an understanding of the universal building blocks of competitive advantage at the business, corporate and international levels. By understanding the nature and determinants of competitive and strategic advantages, students should enhance their professional competencies to be able to take a more strategic and critical perspective.
Prerequisites: MGB220, MGB211, CTB211, MGB222, or CTB232  Antirequisites: MIB314  Equivalent: MGX309  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point and Caboolture  Teaching period: 2011 SEM-1 and 2011 SEM-2

MGB310 SUSTAINABILITY IN A CHANGING ENVIRONMENT
This unit provides participants with an opportunity to investigate selected and critical issues in the relationship between business activity and the imperative of creating sustainable futures. The unit draws on interdisciplinary sources to encourage the development of a systemic view that incorporates global, corporate, and personal levels of analysis. The unit prepares participants to make a significant contribution to the sustainable development of organisations and society. The unit will be of value to business and non-business students seeking careers in private, public, and not-for-profit sectors.
Prerequisites: MGB200, MGB211, CTB211, MGB222, or CTB232  Antirequisites: MGB334, CTB334, MGB212  Equivalent: MGX310  Credit points: 12  Contact hours: 3  Campus: Gardens Point and Caboolture  Teaching period: 2011 SEM-2

MGB320 RECRUITMENT AND SELECTION
This unit examines the most effective techniques for recruiting and selecting the best people for organisations, in the context of current pressures on attracting and keeping skilled, talented people in the workforce. Commonly used recruitment and selection techniques are covered, emphasising the validity and reliability of each technique, to enable the best strategies to be developed.
Prerequisites: MGB339 or MGB221  Equivalent: MGX320  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

MGB324 MANAGING BUSINESS GROWTH
This unit is designed to provide skills in the analysis, solutions and implementation of the general management issues that SME owners have to manage in their growing operations. The unit brings together the different functional aspects of managing an established SME and how they are best managed from the owner's (general manager's) point of view. It also provides opportunity to bring students into contact with real world SME owners and their venture management issues.
Prerequisites: MGB223  Equivalent: MGB218, MGX324  Credit points: 12  Contact hours: 3  Campus: Gardens Point and Caboolture  Teaching period: 2011 SEM-1

MGB331 LEARNING AND DEVELOPMENT IN ORGANISATIONS
This unit is designed to equip you with the skills and knowledge to meet strategic organisational human resource development requirements. The unit explores learning and development concepts and approaches and the role of
learning and development as a strategic partner to management. You will learn how to design, implement and evaluate systems for learning in organisations as part of a strategic approach to human resource development.

**Prerequisites:** MGB211, CTB211, MGB222, CTB232, or MGB200  
**Equivalents:** MGX331  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

**MGB335 PROJECT MANAGEMENT**  
This unit develops knowledge in the areas relating to effective management of projects (as distinct processes). This knowledge is gained by focusing on the central issues of project selection, modelling, planning, control and evaluation. Case study projects are used throughout the unit and are mainly from the services industry sector. The unit seeks to develop the technical skills (tools and techniques) as well as the people (behavioural) skills needed for effective management of projects.

**Prerequisites:** (MGB210 and MGB309) or (MGB210 and AMB303)  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**MGB339 PERFORMANCE AND REWARD**  
This unit will provide you with the basic competencies expected of HR practitioners in managing performance and reward/compensation systems, which are among the most important strategies used by organisations to support competitive advantage. Performance and Reward Management is a key functional area of HRM and it is imperative that you understand the strategic framework within which these decisions are made.

**Prerequisites:** MGB201, MGB207, or CTB207  
**Equivalents:** MGB221, MGX339  
**Credit points:** 12  
**Contact hours:** 3  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

**MGB340 INTERNATIONAL BUSINESS IN THE ASIA-PACIFIC**  
Australia is situated in the fastest growing region in the world - the Pan-Pacific rim. The aim of this unit is to meet the needs of future business professionals working internationally and particularly within the Pan-Pacific region, to understand the nature of this region's business environment.

**Prerequisites:** MGB225, IBB205, IBB217, or IBB208  
**Antirequisites:** IBB317  
**Equivalents:** MGX340  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**MGB370 PERSONAL AND PROFESSIONAL DEVELOPMENT**  
This unit develops personal, interpersonal and team skills that distinguish outstanding human resource, management and other professionals. Recent literature has identified the need for professionals to acquire knowledge in the areas of self management and the management of others to contribute to organisational performance. To achieve this, Personal and Professional Development is positioned at the conclusion of the course to build upon concepts learned in introductory and intermediate units with a strong focus on the application of theory to practice.

**Prerequisites:** MGB331 and BSB124  
**Equivalents:** MGB315, MGX370  
**Credit points:** 12  
**Contact hours:** 3  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**NQB201 PLANET EARTH**  
Earth Science impacts every aspect of modern life. Hence, the concepts of Earth Science are fundamental not only to the field of Geology, but also to Environmental Science, natural resource management, civil engineering and society at large. Planet Earth provides an introduction to Earth Science, including earth materials, geologic history, geological process at the Earth's surface, and the complex interplay between the lithosphere, atmosphere, hydrosphere and biosphere through geologic time. Thus, Planet Earth is a foundation unit for further studies in Geology and Environmental Science and also serves as a broad introduction to the world we live on.

**Equivalents:** NRB230  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**NQB202 HISTORY OF LIFE ON EARTH**  
This unit aims to provide you with an understanding of the processes of evolution and the changing environmental conditions through time that influenced the patterns of the evolution of life on this planet. The unit will provide you with practical experience in fossil plant and animal identification, classification and morphological interpretation. It will also enable you to apply palaeontological information to interpret the evolutionary history of higher taxa and the changing ancient depositional environments through time.

**Equivalents:** NRB240  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**NQB302 EARTH SURFACE SYSTEMS**  
Understanding long and short term climate and environmental change is now recognised as crucial to the interpretation of our biotic, geomorphic and cultural landscapes. To fully understand environment change it is important to recognise the interconnectedness between the atmosphere, hydrosphere, lithosphere, biosphere and humanity’s place within these spheres over various temporal and spatial scales. Developing knowledge of past and present climate change and landscaping processes
helps to predict future process pathways for natural resource management, civil engineering, risk analysis, and impact assessment in the context of both natural and anthropogenic induced change.

**Assumed knowledge:** NQB201 is assumed knowledge.

**Equivalents:** NRB301  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1

**NQB311 MINERALOGY**

Minerals are the building blocks of rocks which comprise the solid Earth. The study of minerals is essential for understanding the structure and composition of the earth and the detailed processes of the rock cycle. Mineralogy forms the basis for petrology (the study of the genesis of rocks) and geochemistry, and is thus essential for Geoscience. The unit may also be of interest to chemists.

**Equivalents:** NRB333  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1

**NQB314 SEDIMENTARY GEOLOGY**

This unit provides students with an introduction to sedimentology; both sediments and sedimentary rocks. The unit focuses on the link between the range of features preserved in sedimentary rocks and what those features tell us about sedimentary processes, depositional environments and the burial history of the rocks. The sedimentological processes and depositional environments observed in the modern world are discussed and used as a foundation for interpreting the evidence preserved in the ancient sedimentary rock record, in turn revealing much about earth processes in geologic history.

**Assumed knowledge:** NQB201 is assumed knowledge.

**Equivalents:** NRB331  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1

**NQB321 ECOLOGY**

Ecology is the study of the factors that influence the distribution and abundance of organisms. Ecology deals with basic properties of individuals and the emergent properties of collections of individuals that form populations and the dynamics of these populations and their interactions with populations of other species. An understanding of basic ecological principles is central to managing species and ecosystems. This unit provides a broad theoretical background in the major concepts of plant and animal ecology. It serves the dual role of providing a thorough grounding in ecology for students from all faculties; and laying the conceptual foundation for later subjects in the ecology and environmental science.

**Prerequisites:** SCB110 or SCB112  **Equivalents:** NRB311  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-1

**NQB403 SOILS AND THE ENVIRONMENT**

This unit will provide you with grounding in soil science (pedology) by emphasising pedological principles, their application to environmental soil analysis and management, and knowledge of ecosystem function of soil in a changing environment. This one of the most critical resources to consider within the context of climate change and is an essential component of environmental scientific studies. It also compliments and provides a basis for further biogeoscientific studies in the SC01 degree. Your knowledge of past and present soil processes will help you to predict process pathways and outcomes for the purposes of environmental planning and management, risk analysis, and impact assessment involving soils. It also contributes to your understanding of field survey and interpretation of soil phenomena in ecological, geological and environmental contexts.

**Prerequisites:** NQB302 or NRB301 or (ENB272 and ENB274)  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-2

**NQB411 PETROLOGY OF IGNEOUS AND METAMORPHIC ROCKS**

Igneous and metamorphic rocks compose the bulk of the Earth. Understanding what these rocks are and how they form is an essential part of the study of geology and is fundamental to a wide range of higher level units. This unit builds upon the knowledge and skills acquired in the prerequisite unit (NQB311 Mineralogy) by focusing on the description, classification and origins of igneous and metamorphic rocks. This unit aims to allow you to develop the theoretical and practical skills necessary to describe, classify and interpret igneous and metamorphic rocks.

**Prerequisites:** NQB311 or NRB333  **Equivalents:** NRB436  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-2

**NQB412 STRUCTURAL GEOLOGY AND FIELD METHODS**

Structural geology, the deformation of earth materials, is one of the main elements in the core curriculum in geology. It is also essential to other subdisciplines of geology, such as foundation engineering and petroleum and mineral exploration. Geologists need to be able to describe and map structures, to understand the mechanical principles of rock deformation, and to be able to manipulate and calculate structural data. This unit fosters the skill of critical three- and four-dimensional analysis that usually sets geoscientists apart from other scientists and technologists.

**Prerequisites:** NQB314 or NRB331  **Equivalents:** NRB434  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2011 SEM-2
NQB421 EXPERIMENTAL DESIGN
This unit deals with the theory and practice of experimental design and the quantitative approaches used for the investigation of ecological and environmental questions discussed in the prerequisite unit Ecology and developed in subsequent units in the ecology and environmental science majors.

The aims of this unit are to provide an introduction to the logic of experimentation and experimental design; build a practical extension on the theoretical basis of statistics obtained in other units using experimental situations commonly met in ecology and environmental science; and apply methods used to quantify the ecological attributes of populations and communities in experimental field situations.

**Prerequisites:** MAB101 or MAB104 or MAB105 , and NQB321 or NRB311  
**Equivalents:** NRB412  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

NQB422 GENETICS AND EVOLUTION
A detailed understanding of the principles of genetics is required to fully comprehend modern developments in ecology and evolutionary theory. These principles will be taken forward to develop a clear understanding of the mechanisms and processes that drive evolution in natural populations. The unit provides the foundation for further studies in population and conservation biology. The aim of the unit is to provide a detailed understanding of the principles of genetics and their application to studies of evolution and ecology.

**Prerequisites:** SCB112  
**Equivalents:** NRB410  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

NQB501 ENVIRONMENTAL MODELLING
The capacity for management of complex environmental problems such as climate change, now and in the future, will rely on the capacity of environmental managers to create, interpret and critically analyse models of environmental systems. Mathematical model building promotes the capacity to understand the interdependent relationships that characterise environmental systems and also provides a quantitative foundation for informed environmental management.

**Prerequisites:** NQB412 or NQB421  
**Assumed knowledge:** 48 credit points of second level science units is assumed knowledge.  
**Equivalents:** NRB500  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

NQB502 FIELD METHODS IN NATURAL RESOURCE SCIENCES
Field experience is an essential part of the professional training of geologists, environmental scientists, ecologists, and natural resource specialists in general. The theory and practice of methods to interpret, measure, map, and monitor important natural resource features and characteristics are essential to the study of geological, ecological and environmental systems. Methods of survey, mapping and interpretation are necessary skills for resource assessment, geo-exploration, environmental impact assessment, land evaluation, baseline studies, and ecological investigations. There are varying emphases on these outcomes depending on the type of field survey you undertake in this unit.

**Prerequisites:** (NQB321 or NQB411) and (NQB302 or NQB412)  
**Assumed knowledge:** 36 credit points of second level science units in selected major is assumed knowledge.  
**Equivalents:** NRB601  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

NQB513 GEOPHYSICS
Geophysics is an integral branch of geology, providing many of the most useful methods of imaging the subsurface of the earth. These methodologies are useful in disciplines as diverse as plate tectonics, oil and mineral exploration, hydrogeology, environmental geology, engineering geology, and seismic hazards. The aim of the unit is to provide you with the core knowledge and skills of geophysical measurements, processing of data, and geological interpretation of geophysical data.

**Prerequisites:** (NQB201 or NRB230) and (NQB412 or NRB434)  
**Equivalents:** NRB534  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

NQB521 POPULATION GENETICS AND MOLECULAR ECOLOGY
This unit is an extension of NQB422 Genetics and Evolution. Topics include the genetic structure of populations and processes of evolutionary change; natural selection, inbreeding and adaptation, species and speciation theory; ecological genetics; the genetics of behaviour.

**Prerequisites:** NQB422  
**Antirequisites:** NQB510  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

NQB523 POPULATION MANAGEMENT
This unit develops the theoretical treatment of populations as a unit of study and integrates the content of previous ecology units into approaches for the management of biological populations. The unit focuses on those interactions that are most relevant to pest control, but the unit is also of fundamental importance to harvesting and conservation biology.
PQB350 THERMODYNAMICS OF SOLIDS AND GASES

This unit considers geological observations in the context of a unifying theory. It examines lithospheric plates, plate geometries, Earth morphology, relative and absolute plate movements, stresses of plate interactions, types of plate boundaries, and orogenesis. It also examines the development of the most important geologic theory of the 20th century.

**Prerequisites:** (NQB412 or NRB434) and (NQB314 or NRB331) and (NQB411 or NRB436) and (NQB513 or NRB534).

**Equivalents:** NRB635

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-1

PQB312 ANALYTICAL CHEMISTRY FOR SCIENTISTS AND TECHNOLOGISTS

This unit addresses three vital theoretical and practical elements of analytical chemistry: quality assurance in a chemical laboratory; principles of chemical sampling; common instrumental techniques. It is a generic unit designed to address the needs and skills of students enrolled in the Chemistry major as well as other majors such as Forensic Science and double degrees in with the Chemistry major. The unit builds on the analytical chemistry concepts introduced in SCB131 Experimental Chemistry. The aim of this unit is to provide students with principles of analytical chemistry, including some common instrumental techniques, which are firmly linked to the theory and practice of the discipline in a modern, working laboratory.

**Prerequisites:** SCB131

**Equivalents:** PCB414

**Credit points:** 12

**Contact hours:** 4.5 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB250 MECHANICS AND ELECTROMAGNETISM

The experimental means by which we have arrived at our modern understanding of the universe is central to the scientific philosophy. Students of physics and physics related areas need to possess skills in quantitative handling, processing, communication and evaluation of data. Higher level studies in specialised areas of Physics require a familiarity with a range of fundamental topics in Physics and an ability to apply critical thinking and advanced mathematical techniques to the analysis and solution of Physical problems. This first-level unit lays the foundation for these higher level studies by introducing the fundamental topic areas of mechanics and electromagnetism.

**Assumed knowledge:** Senior Maths B is assumed knowledge.

**Credit points:** 12

**Contact hours:** 4.5 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB251 WAVES AND OPTICS

Wave phenomena are used to describe and explain many of the physical processes in the universe. Sound and light are the most commonly experienced of these and have far-reaching human applications, including their use as experimental tools for science. The study of wave phenomena has led to the development of quantum mechanics, a cornerstone of modern scientific thought. This first-level unit lays the foundation for discussion of wave phenomena in higher level studies, but will also be relevant to those not considering progressing to a Physics major but wishing to understand more of the Physical world in which we live.

**Assumed knowledge:** Senior Maths B is assumed knowledge.

**Credit points:** 12

**Contact hours:** 4.5 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB331 STRUCTURE AND BONDING

This unit provides detailed coverage of the theories of bonding in organic, inorganic and coordination compounds including orbital hybridisation valence bond theory, coordination theory and crystal field theory. The cause and effect relationships between bonding and structure are developed leading to an understanding of structural variability, chirality, and other modes of isomerism for a broad range of chemical compounds. An introduction to molecular symmetry, which is central to the study of molecular geometry and shape, also provides the background for later studies in spectroscopy. Lectures are complemented by 7 laboratory experiments and 4 hands-on style workshops.

**Prerequisites:** SCB121 and SCB131

**Antirequisites:** PCB334, PCB354

**Credit points:** 12

**Contact hours:** 4.5 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-1

PQB350 THERMODYNAMICS OF SOLIDS AND GASES
This unit provides students with an overview of the basic thermodynamic principles that describe how heat and other forms of energy are transported through matter in its solid and gaseous states. Through integrated lecture and practical classes, it provides students with a foundation for more advanced studies later in areas such as condensed matter physics and quantum mechanics. The three areas of study in this unit; thermodynamics, solid state physics and statistical physics; are essential core topics if students are considering postgraduate study in the physical sciences or professional employment as a physicist.

**Prerequisites:** (PQB250 or PCB250), and (MAB111 or MAB120 or MAB121)

**Assumed knowledge:** Students should enrol in MAB311 in the same semester if not already completed

**Equivalents:** PCB562

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB401 REACTION KINETICS, THERMODYNAMICS AND MECHANISMS

Physical Chemistry is a discipline of chemistry in which the influences of physical factors on chemical reactions are described and quantified. The fundamental factors that govern the extents (equilibria) and rates (kinetics) of chemical reactions are usually the realm of Physical Chemistry. This unit illustrates this basic science with applications of these principles to actual reaction types that are expounded as case studies of the principles underlying the Chemistry. In addition, all students of chemistry need an understanding of the concepts of acids and bases in their widest sense. This unit provides the tools that chemists use to understand how and why molecules react. The aim of this unit is to demonstrate how reactions and their equilibria and rates can be described and quantified, and to understand by studying key examples, the fundamental factors that govern the outcomes of chemical reactions.

**Prerequisites:** PQB331

**Antirequisites:** PCB354, PCB405

**Credit points:** 12

**Contact hours:** 4.5 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB442 CHEMICAL SPECTROSCOPY

Spectroscopic techniques are now widespread in scientific laboratories. An appreciation of both the principles and practice of spectroscopy is essential for those contemplating a career in chemistry. The use of spectroscopic methods to elucidate molecular structure provides an excellent vehicle for training in the scientific method, particularly the logical application of experimental data to deduce the solution to a complex problem. Whilst the fundamental theoretical concepts will be dealt with in the early part of the unit, later emphasis will be on developing practical skills in problem solving, a skill of value to all fields of scientific and technological endeavour.

**Prerequisites:** PQB331

**Equivalents:** PCB444

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB450 ENERGY, FIELDS AND RADIATION

The common theme of the topics covered in this unit is fields, the energy contained in these fields and the transfer of this energy. This theme is addressed in the specific topics of classical mechanics, electromagnetism and radiation physics. The classical mechanics and electromagnetism components build on material presented in introductory units and apply this to complex real world problems. The unit is designed to prepare students for more advanced studies in these areas but the unit will also provide a useful background for students undertaking a comajor in Physics or preparing for a career in secondary education.

**Prerequisites:** PQB250 or PCB250, and MAB311

**Equivalents:** PCB362

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB451 ELECTRONICS AND INSTRUMENTATION

Instrumentation plays an increasingly important role in the life of a scientist. This unit is designed to give the student a working knowledge in instrumentations and the principles of circuit theory and electronics that underlie instrumentation. It is offered at this stage of the program since it relies on work developed in the earlier advanced-level units and provides a basis for experimental work in later units.

**Prerequisites:** PQB250 or PCB250

**Antirequisites:** PCB361, PCB460

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-2

PQB502 ADVANCED PHYSICAL CHEMISTRY

A Chemistry graduate in today's highly technological world requires knowledge of the principles that govern the behaviour of solids, liquids, gases, and mixtures thereof. This leads to an appreciation of how fundamental physical chemical principles determine the bulk properties of materials and how the chemical nature of interfaces govern chemical reactions in many important applications. This unit is placed appropriately in fifth semester, following the second year units that provide the basic principles, language and tools of chemistry.

**Prerequisites:** PQB401

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-1

PQB513 INSTRUMENTAL ANALYSIS

TBA

**Prerequisites:** PQB312 or PCB414

**Equivalents:** PCB514

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2011 SEM-1
PQB531 ORGANIC MECHANISMS AND SYNTHESIS
This unit deals with organic reaction mechanisms and their application in organic synthesis. Topics in mechanisms include: structural and electronic effects that govern reactivity of organic molecules; major classes of mechanisms including elimination reactions, nucleophilic additions to carbonyl compounds, nucleophilic acyl substitution, electrophilic addition to alkenes and electrophilic substitution of aromatics. Topics in synthesis include the principles of organic synthesis design using the retrosynthetic approach; carbon-carbon bond formation to build the major functional group classes; and the use of protecting and activating groups.
Prerequisites: PQB401, PQB442 Antirequisites: PCB554 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2011 SEM-1

PQB550 QUANTUM AND CONDENSED MATTER PHYSICS
TBA
Prerequisites: PQB350 and (MAB134 or MAB311) Equivalents: PCB561 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2011 SEM-1

PQB551 PHYSICAL ANALYTICAL TECHNIQUES
Modern methods of physical analysis are an important tool for the physical scientist. This unit provides an introduction to the physical principles and applications in three fields of analysis: X-ray diffraction, analytical electron microscopy and physical spectroscopy. Each of these topics encompasses a variety of measurement techniques. The methodologies presented have wide application in a number of areas of science and technology including nanotechnology and materials research and development. Lectures are supplemented by laboratory practicals to enable students to gain familiarity and experience with the instrumentation.
Prerequisites: (PQB350 or PCB462) and (MAB112 or MAB122) Equivalents: PCB562 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2011 SEM-1

PQB584 FORENSIC PHYSICAL EVIDENCE
This unit provides a theoretical and practical framework to introduce you to the physical evidence processing techniques of questioned documents and computer forensics and the forensic examination techniques of optical and electron microscopy. The unit will also discuss the physical and chemical structure of some common types of physical evidence (fibres, fabrics & severance, soils and physical fits) and the analytical methods used for their analysis. It is placed appropriately in the fifth semester of the course to coincide with and complement the Instrumental Analysis unit PQB513 which the core knowledge for the instrumental techniques used within the forensic analysis of various types of physical evidence. Prerequisites: PQB312, SCB384 Antirequisites: PCB584 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2011 SEM-1

SCB110 SCIENCE CONCEPTS AND GLOBAL SYSTEMS
You will undertake interdisciplinary study of the physical, geological and biological concepts relating to the origins of life; from the creation of matter and planets, to the emergence of life in all its complexity, culminating in evolution of earth ecosystems. Human influences, overlaid upon earth’s complex systems, will be examined as to their type, extent, and impact. In counterpart, you will explore the breadth of philosophical developments underlying our search for knowledge; fundamental thoughts and ideas that span the last 2,500 years of human history. Ultimately, these concepts evolved through the development of a scientific method and we explore its workings in relation to the ongoing enterprise of human understanding.
Credit points: 12 Contact hours: 4.5 per week Campus: Gardens Point Teaching period: 2011 SEM-1

SCB111 CHEMISTRY 1
Chemistry is the central science. It affects society as well as the individual. It is the language and principal tool of the physical sciences, the biological sciences, the health sciences and the agricultural and earth sciences. A basic knowledge of chemistry is essential to all students in these areas. Knowledge of chemistry allows a better understanding of the human body and of the environment in which we live. The aim of this unit is to introduce you to the basic concepts of general, inorganic, analytical and physical chemistry.
Antirequisites: SCB113 Credit points: 12 Contact hours: 4.5 per week Campus: Gardens Point Teaching period: 2011 SEM-1 and 2011 SEM-2

SCB112 CELLULAR BASIS OF LIFE
Scientists from all disciplines need an appreciation and a broad overview of the characteristics and functioning of the five groups of living organisms (bacteria, protists, fungi, plants and animals), and their interactions with the inanimate world. SCB112 Cellular Basis of Life is a first semester unit that is essential for many students undertaking courses requiring biological knowledge. Through integrated lecture and laboratory classes, this unit provides you with a foundation for later more advanced studies in your course or major (eg such as medical science, biomedical science, pharmacy, optometry, biochemistry, biotechnology, microbiology, geosciences, ecology, business and education among others). The aim of this unit is to introduce you to the wide diversity of living organisms while emphasising the unity of life processes at...
the cellular, biochemical and biophysical levels.

**Antirequisites:** LQB182, LSB118  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**SCB120 PLANT AND ANIMAL PHYSIOLOGY**

Regardless of which area of biology you decide to specialise in, you will need to understand the complex interactions between cells, tissues, organs and organ systems that comprise multi-cellular organisms. Although many living processes can be explained at the levels of biochemistry, biophysics and cell biology, a true understanding of complex, multicellular organisms requires integration of knowledge drawn from all of these areas, combined with the more complex physiological and structural levels you will learn about in this unit. The knowledge gained in this and other first level units provides you with the conceptual framework necessary to understand processes occurring from the cellular to the whole organism level and to higher levels of organisation.

**Prerequisites:** SCB112  
**Equivalents:** NRB270  
**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**SCB121 CHEMISTRY 2**

Chemistry is the central science. This is a unit of fundamental importance as it covers the background and general principles that underpin understanding in many science and health related disciplines. In this unit you will be introduced to fundamental aspects of chemistry including the nature of matter, atoms, molecules and ions. From this basis you will develop an understanding of the electronic structure of atoms, chemical bonding and molecular structure as well as the fundamentals of organic chemistry (often described as the chemistry of life). The aims of this unit are to generate an understanding of the importance of chemical bonding and molecular structure and how these factors effect the properties of organic and bioinorganic molecules; and to allow recognition of, and provide an understanding of, the nature of organic functional groups and their respective reactivity.

**Prerequisites:** (SCB111 or PCB142). SCB111 can be studied in the same teaching period  
**Antirequisites:** POB105 and SCB113  
**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1 and 2011 SEM-2

**SCB122 CELL AND MOLECULAR BIOLOGY**

SCB122 Cell and Molecular Biology 1 equips students with a comprehensive understanding the molecular basis of the cell. This unit expands on the basic principles and concepts relating to cell structure, function, perpetuation and specialisation introduced in SCB112 and introduces students to fundamental molecular mechanisms central to the organisation of the cell. Students will be shown how macromolecular interactions are crucial to information flow and heredity. Students are taught the relationships between chromosomes, genes and cellular function and ultimately how these may determine an organism's phenotype. This unit underpins cell biology and molecular biology units that are offered in second year Life Science units. SCB122 is also ideal for interfaculty students (eg Education, Business, Arts) who will undertake no further life science studies.

**Prerequisites:** SCB112, SCB112 can be studied in the same teaching period.  
**Antirequisites:** LSB238  
**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**SCB123 PHYSICAL SCIENCE APPLICATIONS**

Physics principles underpin all of the sciences and 'new technologies'. This unit adopts an investigative team-based approach to provide students with an appreciation of fundamental concepts in physical science, together with experience in the application of these concepts to a range of 'real world' problems. The unit should be taken in the first year of study as the fundamental principles introduced here will be built upon in later units in the context of each science student's major discipline area. Employers in cutting-edge industries expect science graduates to have effective strategies for problem solving, skills for collaborative work and scientific communication and research skills. This unit aims to develop these skills by applying the fundamental concepts of physical science to problems in a team environment.

**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**SCB131 EXPERIMENTAL CHEMISTRY**

Chemistry is the central science. A detailed study of chemistry and related disciplines requires the development of practical laboratory skills for synthesis and chemical analysis. This unit is designed specifically to develop these aspects of chemistry. This unit is a laboratory-based unit which is designed for students who intend to continue with experimental science units. The lectures complement the weekly practical sessions and teach the theory required to interpret experimental results. The aim of this unit is to develop a broad knowledge of, and the practical skills required for, scientific experiments in chemistry. The skills acquired in this unit are transferable to other practical sciences including medical science, biochemistry, molecular biology and pharmacy.

**Prerequisites:** SCB113 or POB105 or (SCB111 and SCB121). SCB121 can be concurrently enrolled with SCB131  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**SCB222 EXPLORATION OF THE UNIVERSE**

This unit provides an introduction to optical observational astronomy; instrumentation; celestial sphere and
astronomical coordinates; observations of constellations, stars, planets, clusters and other interesting celestial objects. The theory includes: optics of telescopes; properties of light; determination of physical properties of stars; nebulæ; stellar spectra and classification; historical models of the solar system; Kepler's law, gravitation; physical geology of the planets and formation of the solar system; phenomena of astronomical origin; brief introduction to stars and galaxies. This course includes practical exercises and field trips.

**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

**SCB384 FORENSIC SCIENCES - FROM CRIME SCENE TO COURT**  
This unit provides an introduction to two fundamental areas in forensic science, crime scenes and justice. Mock crime scenes involving real life scenarios are used to provide hands-on training on crime scene management and examination protocols. The principles for forensic examination of crime scenes involving fire, explosion, murder, etc, are introduced through lectures, workshops and practical exercises. Also an overview of the techniques used in forensic photography, fingerprinting as well as Legal procedures at court is presented. This unit is provided by professional forensic practitioners with practical real life experience being transferred to new generations. This head start provides a unique advantage for a strong career in forensics.

**Credit points:** 12  
**Contact hours:** 4.5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1