Bachelor of Urban Development (Construction Management) (UD40)

Year offered: 2013
Admissions: Yes
CRICOS code: 056387B
Course duration (full-time): 4 years
Domestic Fees (indicative): 2013: CSP $4,400 (indicative) per Semester (48 credit points)

**Student Services and Amenities Fee**
You'll need to pay the Student Services and Amenities Fee (SSAF) as part of your course costs. More information on the SSAF - http://www.student.qut.edu.au/fees-and-finances/study-costs/fee-schedule/table-l-student-services-and-amenities-fee

Additional costs You'll need to pay some costs on top of your course fees. Additional course costs - http://qut.edu.au/study/fees-and-scholarships/additional-compulsory-course-costs

Start month: February, July
QTAC code: 412312
Past rank cut-off: 85
Past OP cut-off: 8
OP Guarantee: Yes
IELTS (International English Language Testing System): Overall: 6.0, Subscores: 6.0
Deferment allowed: Yes
Total credit points: 384
Standard credit points per full-time semester: 48
Course coordinator: Chris Eves
Discipline coordinator: Dr Matthew Gray
Campus: Gardens Point
Attendance: Full-time

Assumed knowledge: English
Assumed knowledge notes: We assume that you have knowledge equivalent to four semesters at high school level (Years 11 and 12) with sound achievement (4, SA) of English and one of the following: Maths A, Maths B or Maths C.
For information on acquiring assumed knowledge visit http://www.qut.edu.au/assumed-knowledge

Course highlights
- Study a Bachelor of Urban Development Construction Management and facilitate your path to a challenging and interesting career.
- Learn to coordinate the construction and maintenance of large and complex projects such as low-rise and high-rise housing developments, hotels, factories, office blocks, schools and hospitals.
- Study project management, building systems and product research, building technology and science, measurement and estimation, surveying, building practice, sustainability and communication.
- Program accredited by the Australian Institute of Building.

Details:
Construction managers are responsible for the coordination and supervision of the construction of large and often complex building projects such as low-rise and high-rise apartments, hotels, factories, office blocks, commercial buildings, schools and hospitals.

Why choose this course?
The construction management course at QUT is considered one of the best in Australia and is highly ranked internationally. The course provides you with skills to manage resources (plant, materials, subcontractors and labour) and equips you to obtain meaningful employment in the construction industry. You will gain skills in the broad foundations of construction management, such as measurement and estimating, site management, scheduling and programming, and technical communications.

Construction management teaching staff at QUT have real-world experience in a variety of practical and theoretical contexts, and maintain constant engagement with industry professionals and organisations. You will regularly attend lectures and tutorials as part of your engagement with this course in real-world construction management, often delivered by the industry’s best frontline professionals. You will also undertake professional practice, learn problem-solving techniques using specific case studies and attend site visits to become a valuable work-ready graduate once you complete the course.

Career outcomes
A construction management degree can facilitate your path to a challenging and interesting career, with the prospects of extremely high job satisfaction and financial rewards. You may be employed in private organisations such as large construction and development companies or consultancies, or government departments.

As a graduate construction manager, you may be required to supervise construction, coordinate subcontractors’ plant, materials and equipment, estimate costs and quantities of materials needed and plan construction methods and procedures. You will also help to ensure that the requisite standards of building performance, quality, cost schedules...
and safety are achieved, in accordance with the building contract documents, and that building projects under your supervision are completed—on time, to budget and of a required standard of quality.

Other tasks that are typical for construction managers in the field include studying and interpreting building contract documents, negotiating with developers and subcontractors and assisting in controlling project budgets as well as preparing documentation for contract tender bids. You may also be involved in ensuring compliance with building regulations and standards and that by-laws are suitably enforced on projects in consultation with architects, engineers, other construction professionals and partners in related technical disciplines.

**Professional recognition**

The course is accredited by the Australian Institute of Building.

**Structures and Units**

**Work Integrated Learning unit**

In your final year students are required to undertake 100 days approved industrial experience in the construction or allied field.

**Your course**

**Year 1**

You start your studies with foundation units including residential construction and engineering, basic professional learning (including an introduction to research writing), sustainability, land stewardship, urban development economics and building measurement.

**Year 2**

You build on your knowledge of construction management by studying low-rise commercial construction and engineering, structural engineering, building measurement and estimating, construction-related law, building services engineering, basic business skills and minor study units.

**Year 3**

You increase your knowledge by studying high-rise construction and advanced structural and formwork design. You extend your management learning in business skills, contract administration and statutory construction law and further engage in your chosen minor study units as well as building your research capabilities.

**Year 4**

Your final year draws together previous learning and integrates it with more advanced concepts of strategic management, program and planning management, and human resources planning, preparing you for entry to the construction industry at managerial level. You have the opportunity to gain interdisciplinary skills via your minor units and specialist skills in advanced construction management and research methods and report writing.

**Minors**

For accreditation purposes you are required to undertake specified minors which will include employment practice. Please refer to your course rules before making your selection.

Construction management minor options

- All students must take the Construction Management Applications Minor, which is an AIB accreditation requirement.
- Your second minor may be taken from anywhere in QUT but must be from outside UD40. The Project Collaboration Minor is highly recommended for students in Construction Management.

**Construction Management major - Students commencing February 2010 onwards**

<table>
<thead>
<tr>
<th>Year 1 - Semester 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDB100 Urban Development and Sustainability</td>
</tr>
<tr>
<td>UDB101 Stewardship of Land</td>
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<tr>
<td>UDB110 Residential Construction and Engineering</td>
</tr>
<tr>
<td>UDB111 Engineering Construction Materials</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1 - Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDB200 Project Planning in Urban Development</td>
</tr>
<tr>
<td>UDB104 Urban Development Economics</td>
</tr>
<tr>
<td>UDB112 Professional Studies 1</td>
</tr>
<tr>
<td>UDB113 Measurement 1</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 - Semester 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDB210 Commercial Construction and Engineering</td>
</tr>
<tr>
<td>UDB211 Introductory Structural Engineering</td>
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<tr>
<td>UDB212 Measurement 2</td>
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<tr>
<td>UDB213 Construction Estimating</td>
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</tbody>
</table>

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<tr>
<th>Year 2 - Semester 2</th>
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</thead>
<tbody>
<tr>
<td>UDB102 Applied Law</td>
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<tr>
<td>UDB214 Professional Studies 2</td>
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<tr>
<td>UDB215 Building Services Engineering</td>
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<table>
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<tr>
<th>Year 3 - Semester 1</th>
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<tbody>
<tr>
<td>Course</td>
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<tr>
<td>UDB310</td>
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<td>UDB311</td>
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<tr>
<td>UDB312</td>
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<td>UDB313</td>
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</tbody>
</table>

**Year 3 - Semester 2**
- UDB202  Business Skills
- UDB314  Statutory Construction Law
- UDB420  Project Administration
- Minor unit

**Year 4 - Semester 1**
- BEB701  Work Integrated Learning 1
- UDB301  Research Methods
- UDB313  Programming and Scheduling
- Minor unit

**Year 4 - Semester 2**
- BEB801  Project 1
- UDB302  Development Process
- UDB316  Cost Planning and Control
- UDB410  Strategic Construction Management

**Full-time Course Structure - Commencing Mid-Year 2010 onwards**

**Year 1 - Semester 2**
- UDB200  Project Planning in Urban Development
- UDB102  Applied Law
- UDB104  Urban Development Economics
- UDB202  Business Skills

**Year 2 - Semester 1**
- UDB100  Urban Development and Sustainability
- UDB110  Residential Construction and Engineering
- UDB111  Engineering Construction Materials
- UDB211  Introductory Structural Engineering

**Year 2 - Semester 2**
- UDB112  Professional Studies 1
- UDB113  Measurement 1
- UDB215  Building Services Engineering
- Minor Unit

**Year 3 - Semester 1**
- UDB210  Commercial Construction and Engineering
- UDB212  Measurement 2
- UDB213  Construction Estimating
- UDB310  Highrise Construction and Engineering

**Year 3 - Semester 2**
- UDB214  Professional Studies 2
- UDB314  Statutory Construction Law
- UDB420  Project Administration
- Minor Unit

**Year 4 - Semester 1**
- BEB701  Work Integrated Learning 1
- UDB101  Stewardship of Land
- UDB301  Research Methods
- UDB311  Structural Engineering Design

**Year 4 - Semester 2**
- BEB801  Project 1
- UDB302  Development Process
- UDB316  Cost Planning and Control
- UDB410  Strategic Construction Management

**Year 5 - Semester 1**
- UDB312  Contract Administration
- UDB313  Programming and Scheduling
- Minor Unit
- Minor Unit

Construction Management Applications Minor (UD40MNR-APPCONS) unit set

**AIB ACCREDITATION REQUIREMENT**
- BEB701  Work Integrated Learning 1
- BEB801  Project 1
- UDB316  Cost Planning and Control
- UDB420  Project Administration

Faculty Minor options

**Collaborative Digital Design**

PLEASE NOTE: This minor is no longer available for commencement from the end of 2012.

The aim of the Collaborative Digital Design minor is to provide a series of units in which:
* You will collaborate with students from different disciplines across BEE on developing designs against a range of criteria.

* You will learn to use a range of software tools that improve communication between the members of the design and manufacture/construction team and between the project team and non-technical stakeholder.

* You will use a range of software support tools that allow the rapid exploration of alternatives and resolution of design problems.

* You will develop skills to reflect on and characterise how tools support interdisciplinary collaboration and to understand how these tools may fit into workflows in industry.

Select 48cp from the Collaborative Digital Design Unit Options below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>BEB210</td>
<td>Introduction to Collaboration</td>
</tr>
<tr>
<td>BEB211</td>
<td>Parametric Design Systems</td>
</tr>
<tr>
<td>BEB212</td>
<td>Advanced Collaboration</td>
</tr>
<tr>
<td>BEB213</td>
<td>Sustainable Design Systems</td>
</tr>
<tr>
<td>KIB103</td>
<td>Introduction to Web Design and Development</td>
</tr>
</tbody>
</table>

Indigenous Studies (DISC 30/06/2013)

FOR CONTINUING STUDENTS ONLY. Uni-wide minor EDBXMNR-INDIGEN (Indigenous Studies Minor) is another option for interested students.

This minor has been developed in consultation with the Oodgeroo Unit, to focus on indigenous perspectives on built environment and engineering and the professions served by these fields of study.

Units will be sourced in other Faculties & Divisions. Further information on units included in this minor is available at the Oodgeroo Unit subject information page at http://www.oodgeroo.qut.edu.au/about/unitscourse.jsp

Select 48cp from the Indigenous Studies Unit Options below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>EDB007</td>
<td>Culture Studies: Indigenous Education</td>
</tr>
<tr>
<td>EDB038</td>
<td>Indigenous Australian Culture Studies</td>
</tr>
<tr>
<td>EDB039</td>
<td>Indigenous Politics and Political Culture</td>
</tr>
<tr>
<td>EDB040</td>
<td>Indigenous Knowledge: Research Ethics and Protocols</td>
</tr>
<tr>
<td>EDB041</td>
<td>Indigenous Australia: Country, Kin and Culture</td>
</tr>
</tbody>
</table>

Maximum of one unit of Work-integrated Learning (BEB701-BEB707). Work experience must be conducted in a professional or community organisation focusing on Indigenous issues.

International (DISC 30/06/2013)

FOR CONTINUING STUDENTS ONLY. Uni-wide minor BSBXMNR-INTLBUS (International Business Minor) is another option for interested students.

This minor will allow you to focus on international issues and prepare for global professional practice. The focus on business languages and international business is designed to equip students who choose this minor to work more readily in international environments.

Select 48cp from the International or Language Unit Options below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSB119</td>
<td>Global Business</td>
</tr>
<tr>
<td>AMB336</td>
<td>International Marketing</td>
</tr>
<tr>
<td>AMB210</td>
<td>Importing and Exporting</td>
</tr>
<tr>
<td>AMB303</td>
<td>International Logistics</td>
</tr>
<tr>
<td>MGB225</td>
<td>Intercultural Communication and Negotiation Skills</td>
</tr>
</tbody>
</table>

Foreign Language units (minimum of two units)

Project Collaboration

The Minor in Project Collaboration is designed to provide you with appropriate knowledge and skills for your involvement in delivering projects in professional organisations in the public and private sectors. It addresses the main concepts and methodologies of project management.

The course will aim to produce graduates who are capable of supporting project managers to successfully managing projects through the management of constraints in time, cost and quality, as well as social, political and environmental challenges.

The Minor in Project Collaboration offers you both the theoretical understanding and practical applications of professional project development and management practices, with a focus on built environment and engineering projects.

Note:

***Students in UD40 Bachelor of Urban Development (Construction Management) cannot take UDB313 or BEB113 due to content overlap with core Construction Management units.

Select 48cp from the Project Collaboration Unit Options below:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>UDB313</td>
<td>Programming and Scheduling</td>
</tr>
<tr>
<td>BEB110</td>
<td>Organising and Managing Project Team</td>
</tr>
<tr>
<td>BEB111</td>
<td>Managing Project Quality</td>
</tr>
<tr>
<td>BEB112</td>
<td>Principle of Project Management</td>
</tr>
<tr>
<td>BEB113</td>
<td>Managing Project Cost</td>
</tr>
</tbody>
</table>
BEB114 Project Financing

Research

(BEE students only)
This minor is designed to ensure that students with interest and capacity for higher degree research have the opportunity, during their undergraduate degree, to be well-prepared to undertake further study following graduation. This minor contains units that allow you to develop, implement and evaluate research knowledge and skills.

Units will be offered to illustrate a broad range of research types such as practice-led research, experimentally-based research, and work-based research.

Select 48cp from the Research Unit Options below:

EDN612 Conducting Innovative Educational Research
ENB379 Transport Engineering and Planning Applications
ENB441 Applied Image Processing
ENB448 Signal Processing and Filtering
ENB474 Finite Element Methods
MAB210 Probability and Stochastic Modelling 1
MAB314 Probability and Stochastic Modelling 2
MAB524 Statistical Inference
MAB536 Time Series Analysis 1
PYB110 Psychological Research Methods

Sustainability (Discontinued)

PLEASE NOTE: This minor is no longer available for commencement from the end of 2012.

This minor will allow you to develop deeper understandings of and specialisations in the future role of your profession in the sustainable development of modern societies. The minor will build on Faculty-wide common units in Professional Learning and Sustainability.

Minor Contents:
* One to four specialisation units
* Up to two units of work-integrated learning (WIL)
* Up to two problem-based multidisciplinary project units

Notes:
Students would be expected to complete one of DEB100/ENB100/UDB100 first, but this would not be a prerequisite.
All students in the Bachelor of Design seeking a Minor in Sustainability must take a minimum of two of the following units: BEB901-BEB904

Design students enrolling in the Sustainability minor must first consult and obtain approval from the Subject Area Coordinator/Course Coordinator prior to enrolling in BEB801 or BEB802.

Select 48cp from the Sustainability Unit Options below:

Specialisation Units:
BEB901 Retrofitting for Sustainability
BEB902 Greening the Built Environment
BEB903 Greenhouse Solutions
BEB904 Eco-Innovation for Sustainability
BEB213 Sustainable Design Systems

Work-Integrated Learning Units (must address sustainability objectives):
BEB701 Work Integrated Learning 1
BEB702 Work Integrated Learning 2
BEB703 Work Integrated Learning 3
BEB704 Work Integrated Learning 4
BEB705 Work Integrated Learning 5
BEB706 Work Integrated Learning 6
BEB707 Work Integrated Learning 7

Work-integrated Learning 1
(Not available to UD40MJR-URBPLAN students.)
This minor will allow you to undertake structured work experience, guided by academic objectives, for academic credit.

Select 48cp from the Work-integrated Learning Unit Options below:

BEB701 Work Integrated Learning 1
BEB702 Work Integrated Learning 2
BEB703 Work Integrated Learning 3
BEB704 Work Integrated Learning 4
BEB705 Work Integrated Learning 5
BEB706 Work Integrated Learning 6
BEB707 Work Integrated Learning 7

Engineering Studies Minor options

Introduction to Civil Engineering Studies (ENBXMNR-CIVLENG)
(not available to EN40 students)
ENB110 Engineering Statics and Materials
ENB270 Engineering Mechanics of Materials
<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>MAB126</td>
<td>Mathematics for Engineering 1</td>
</tr>
<tr>
<td>ENB272</td>
<td>Geotechnical Engineering 1</td>
</tr>
<tr>
<td>ENB276</td>
<td>Structural Engineering 1</td>
</tr>
<tr>
<td>ENB280</td>
<td>Hydraulic Engineering</td>
</tr>
<tr>
<td>ENB120</td>
<td>Electrical Energy and Measurements</td>
</tr>
<tr>
<td>ENB250</td>
<td>Electrical Circuits</td>
</tr>
<tr>
<td>MAB126</td>
<td>Mathematics for Engineering 1</td>
</tr>
<tr>
<td>ENB240</td>
<td>Introduction to Electrical Engineering Studies</td>
</tr>
<tr>
<td>ENB246</td>
<td>Engineering Problem Solving</td>
</tr>
<tr>
<td>ENB110</td>
<td>Engineering Statics and Materials</td>
</tr>
<tr>
<td>ENB212</td>
<td>Strength of Materials</td>
</tr>
<tr>
<td>MAB126</td>
<td>Mathematics for Engineering 1</td>
</tr>
<tr>
<td>ENB221</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ENB222</td>
<td>Thermodynamics 1</td>
</tr>
<tr>
<td>ENB231</td>
<td>Materials and Manufacturing 1</td>
</tr>
<tr>
<td>UDB102</td>
<td>Applied Law</td>
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<tr>
<td>UDB312</td>
<td>Contract Administration</td>
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<tr>
<td>UDB216</td>
<td>The Environment and the Quantity Surveyor</td>
</tr>
<tr>
<td>UDB101</td>
<td>Stewardship of Land</td>
</tr>
<tr>
<td>UDB202</td>
<td>Business Skills</td>
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<tr>
<td>UDB314</td>
<td>Statutory Construction Law</td>
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**Introduction to Mechanical Engineering Studies (ENBXMNR-MECHENG)**

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>ENB120</td>
<td>Electrical Energy and Measurements</td>
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<td>ENB250</td>
<td>Electrical Circuits</td>
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<tr>
<td>MAB126</td>
<td>Mathematics for Engineering 1</td>
</tr>
<tr>
<td>ENB221</td>
<td>Fluid Mechanics</td>
</tr>
<tr>
<td>ENB222</td>
<td>Thermodynamics 1</td>
</tr>
<tr>
<td>ENB231</td>
<td>Materials and Manufacturing 1</td>
</tr>
<tr>
<td>UDB140</td>
<td>Property Valuation 1</td>
</tr>
<tr>
<td>UDB240</td>
<td>Planning Theory and Processes</td>
</tr>
<tr>
<td>UDB245</td>
<td>Urban Land Studies</td>
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<tr>
<td>UDB302</td>
<td>Development Process</td>
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<tr>
<td>UDB243</td>
<td>Property Economics</td>
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**Urban Development Minor options**

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<tr>
<th>Code</th>
<th>Course Name</th>
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<tr>
<td>UDB216</td>
<td>The Environment and the Quantity Surveyor</td>
</tr>
<tr>
<td>UDB316</td>
<td>Cost Planning and Control</td>
</tr>
<tr>
<td>UDB110</td>
<td>Residential Construction and Engineering</td>
</tr>
<tr>
<td>UDB210</td>
<td>Commercial Construction and Engineering</td>
</tr>
<tr>
<td>UDB113</td>
<td>Measurement 1</td>
</tr>
<tr>
<td>UDB104</td>
<td>Urban Development Economics</td>
</tr>
<tr>
<td>UDB242</td>
<td>Property Valuation 2</td>
</tr>
<tr>
<td>UDB246</td>
<td>Property Feasibility Studies</td>
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<tr>
<td>UDB341</td>
<td>Property Finance</td>
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**Property Economics Development (UDBXMNR-PROPDEV)**

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>UDB242</td>
<td>Property Valuation 2</td>
</tr>
<tr>
<td>UDB246</td>
<td>Property Feasibility Studies</td>
</tr>
<tr>
<td>UDB341</td>
<td>Property Finance</td>
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</tbody>
</table>

**Property Economics Investment (UDBXMNR-PROPINV)**

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>UDB140</td>
<td>Property Valuation 1</td>
</tr>
<tr>
<td>UDB242</td>
<td>Property Valuation 2</td>
</tr>
<tr>
<td>UDB246</td>
<td>Property Feasibility Studies</td>
</tr>
<tr>
<td>UDB341</td>
<td>Property Finance</td>
</tr>
<tr>
<td>UDB344</td>
<td>Property and Asset Management</td>
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</tbody>
</table>

**Property Economics Valuation (UDBXMNR-PROPVAL)**

<table>
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<tr>
<th>Code</th>
<th>Course Name</th>
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<tr>
<td>UDB140</td>
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</tr>
<tr>
<td>UDB242</td>
<td>Property Valuation 2</td>
</tr>
<tr>
<td>UDB246</td>
<td>Property Feasibility Studies</td>
</tr>
</tbody>
</table>
Select four units from the Residential Construction unit options below:

- UDB110 Residential Construction and Engineering
- UDB111 Engineering Construction Materials
- UDB112 Professional Studies 1
- UDB113 Measurement 1
- UDB213 Construction Estimating
- UDB214 Professional Studies 2

Select four units from the Urban and Regional Planning Studies unit options below, of which at least two must be advanced units.

- UDB101 Stewardship of Land
- UDB161 Introduction to Planning and Design
- UDB162 History of Built Environment
- UDB163 Land Use Planning
- UDB164 Population and Urban Studies
- UDB266 Planning Processes and Consultations
- UDB267 Development Assessment and Infrastructure
- UDB368 Urban Design
- UDB369 Negotiation and Conflict Resolution
- UDB370 Environmental Planning and Management
- UDB471 Urban Planning Practice
- UDB475 Regional and Metropolitan Policy

Further information is located at:
http://www.bus.qut.edu.au/courses/languages/

- Mandarin Language (BSBXMNR-MNDARIN)
- Italian (BSGUMNR-ITALIAN)
- Japanese (BSGUMNR-JAPAN)
- Spanish (BSGUMNR-SPANISH)
- French (BSUQMNR-FRENCH)
- German (BSUQMNR-GERMAN)
- Indonesian (BSUQMNR-INDO)
- Japanese (BSUQMNR-JAPAN)
- Korean (BSUQMNR-KOREAN)
- Russian (BSUQMNR-RUSSIAN)
- Spanish (BSUQMNR-SPANISH)

Potential Careers:
Construction Manager, Contract Administrator, Estimator, Project Manager, Urban and Regional Planner, Urban Designer.

UNIT SYNOPSES

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 evolving area of international business operations that reflects the dynamic nature of trans-national trade in the global economy. This unit examines the importance of importing and exporting for Australia’s economic development.

It provides key information related to importing and exporting, uses industry perspectives on issues of current importance.
in international trade and provides a structured tutorial programme to achieve this.  

**Prerequisites:** BSB119 or CTB119  
**Equivalents:** AMX210, IBB210  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1 and 2013 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:** 2013 SEM-1 and 2013 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  
**Equivalents:** AMX336, IBB213  
**Credit points:** 12  
**Campus:** Gardens Point and Caboolture  
**Teaching period:** 2013 SEM-1, 2013 SEM-2 and 2013 SUM

**BEB110 ORGANISING AND MANAGING PROJECT TEAM**  
The unit focus is on the dynamics of managing and organising project teams involved in delivering built environment, engineering or infrastructure projects. Recent literature has identified the need for managers and leaders to acquire knowledge in the areas of self management and the management of others to contribute to project effectiveness. You will be introduced to key managerial and human resource theories to assist in the development of analytical and interpretive skills to enable you to proactively and effectively lead project teams.  

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**BEB111 MANAGING PROJECT QUALITY**  
This unit is one of four within the BEE minor in Project Collaboration and is designed to provide you with appropriate knowledge and skills needed for your involvement in delivering projects in professional organisations in the public and private sectors, by ensuring that the achieved project quality outcomes accord with client requirements and satisfy customer expectations.  

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**BEB112 PRINCIPLE OF PROJECT MANAGEMENT**  
Project Management is the overall planning, control and coordination of a project, from inception to completion, aimed at meeting a client's requirements in order that the project will be completed on time within authorized cost and to the required quality standards. The aim of this unit is to provide the key concepts and foundation knowledge in project management, and to describe, clarify, and formalise project management process.  

**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**BEB113 MANAGING PROJECT COST**  
Cost is a major metric of a successful project management. This unit introduces the process of managing project cost which includes planning, estimating, budgeting, and controlling costs so that the project can be completed within the approved budget.  

**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**BEB114 PROJECT FINANCING**  
Project is growing in complexity and size. Many projects never get off the ground due to insufficient financing. It is therefore necessary for project managers to know the sources and cost of project funds in order to package a financially viable project for approval. This unit introduces capital budgeting, project finance, and risk analysis. It covers the capital allocation framework, project cash flows, cost of capital, financial risk analysis, and how various types of projects are financed.  

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**BEB210 INTRODUCTION TO COLLABORATION**  
This unit introduces students to the foundational aspects of collaboration within the design and documentation of artefacts, using Building Information Modelling (BIM) approach. Focusing on multidisciplinary collaboration during the complete life cycle of a built environment facility. This
This unit is an approach to the theory and practice of BIM software, exploring the translation from Computer Aided Design (CAD) to BIM. This unit is also the foundation for BEB212 Advanced Collaboration.

**Assumed knowledge:** DE40/ UD40 students completion of Yr 1 units; EN40 students completion of Yr 1 & 2 units. Additionally, for all students, working knowledge of 3D CAD software for your discipline, demonstrated by completion of one unit utilising 3D CAD or equivalent. **Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

### BEB211 PARAMETRIC DESIGN SYSTEMS

This subject introduces students to the use of parametric geometry systems that are used in early stages of design. These are the systems used by major design firms such as Zaha Hadid and Frank Gehry (architecture), SOM (architecture/engineering) and Arup (engineering).

**Assumed knowledge:** DE40/ UD40 students completion of Yr 1 units; EN40 students completion of Yr 1 & 2 units. Additionally, for all students, working knowledge of 3D CAD software for your discipline, demonstrated by completion of one unit utilising 3D CAD or equivalent. **Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

### BEB212 ADVANCED COLLABORATION

In a real environment designers need to collaborate with others using a range of design tools provided by different software vendors. In this unit you will develop an understanding of interoperability and methods of maximising the benefits of information exchange across a range of design tools.

**Prerequisites:** BEB210  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

### BEB213 SUSTAINABLE DESIGN SYSTEMS

A range of sustainability tools will be covered that support environmental impact analysis, economic analysis and social impact assessment, within a holistic approach to design. The capabilities of the tools will be discussed and then used to build up appropriate workflows that support integrated assessment for sustainability. These will be applied to a comprehensive design problem to reinforce the students understanding.

**Assumed knowledge:** DE40/ UD40 students completion of Yr 1 units; EN40 students completion of Yr 1 & 2 units. Additionally, for all students, working knowledge of 3D CAD software for your discipline, demonstrated by completion of one unit utilising 3D CAD or equivalent. **Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

### BEB701 WORK INTEGRATED LEARNING 1

This unit aims to provide you with the opportunity to learn in a workplace environment. It will involve attendance, participation, observation, critical reflection, and report writing on workplace activities. The emphasis of your critical reflection and report writing will be on identifying and describing aspects of professional relevance incorporating: collaboration and teamwork; work place, health and safety; professional conduct; ethical responsibility, and other aspects of your work place experience.

This unit may form part of your (compulsory) course core (as required by professional accrediting bodies e.g. Engineers Australia, Australian Institute of Building, Royal Institution of Chartered Surveyors), or it may be one of several work integrated learning (WIL) units (selected as part of a Minor).

**Assumed knowledge:** This unit is not designed for first year students. It is recommended that you check WIL Community Blackboard site for information on enrolment pattern. If you are EN40 student you can only enrol after completing a minimum of 192 cp. **Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1, 2013 SEM-2 and 2013 SUM

### BEB702 WORK INTEGRATED LEARNING 2

This unit aims to provide you with the opportunity to continue to learn in a work place environment. It will involve attendance, participation, observation, and reflection on activities negotiated with the work place supervisor. The emphasis of your critical reflection for this unit is to explicate the culture of the organisation you work for via the profile it presents to its employees, clients and the public and critique the role of an individual in a work place and how this relates to other employees in meeting the organisations aims and objectives.

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1 and 2013 SEM-2

### BEB703 WORK INTEGRATED LEARNING 3

This unit will provide you with the opportunity to consolidate and extend your learning through a work placement and associated projects. It will involve some on-campus attendance at lectures and online tutorials as well as participation in, observation of, and reflection on activities undertaken during the work placement. The emphasis in the unit is on the critical reflection of academic learning and its application in practice. This is supported through an emphasis on the development of high order observation skills and critical reflection skills. The outcomes of your learning will be recorded in your e-portfolio. Most students undertaking this unit will do so as part of a WIL Minor.

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1 and 2013 SEM-2
BEB704 WORK INTEGRATED LEARNING 4
As with the previous WIL units, this unit involves participation in a work placement, associated projects and on-campus lectures and seminars to further extend and consolidate students’ learning and preparation for professional practice. The emphasis in this unit is on developing a broader appreciation of the issues impacting on industry, the nature of academic and practice knowledge and how they can be productively integrated to respond to the needs of and the challenges facing professional practice. The unit also gives explicit attention to the continuing development of graduate capabilities including oral communications skills. This unit is normally undertaken as the last unit in the first WIL Minor.

Credit points: 12  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB705 WORK INTEGRATED LEARNING 5
This unit is normally undertaken as the first unit of a second WIL Minor. While the first WIL Minor emphasises the context of practice and its relationship to academia, the second WIL Minor focuses on the participation of students in work in a more proactive and leading way thereby providing the opportunity for sophisticated, collaborative and reciprocal learning and outcomes for all concerned. In this context, this unit introduces students to the notion of practice-led research and research-led practice and provides them with the opportunity to use practice-based projects as vehicles for further developing discipline knowledge as well as advanced critical enquiry skills. In undertaking the unit, students will collaborate with a project supervisor and prepare an interim and final report and seminar on the project.

Credit points: 12  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB706 WORK INTEGRATED LEARNING 6
This unit is normally undertaken as the first unit of a second WIL Minor. While the first WIL Minor emphasises the context of practice and its relationship to academia, the second WIL Minor focuses on the participation of students in work in a more proactive and leading way thereby providing the opportunity for sophisticated, collaborative and reciprocal learning and outcomes for all concerned. In this context, this unit introduces students to the notion of practice-led research and research-led practice and provides them with the opportunity to use practice-based projects as vehicles for further developing discipline knowledge as well as advanced critical enquiry skills. In undertaking the unit, students will collaborate with a project supervisor and prepare an interim and final report and seminar on the project.

Credit points: 12  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB707 WORK INTEGRATED LEARNING 7
This unit is normally undertaken as the first unit of a second WIL Minor. While the first WIL Minor emphasises the context of practice and its relationship to academia, the second WIL Minor focuses on the participation of students in work in a more proactive and leading way thereby providing the opportunity for sophisticated, collaborative and reciprocal learning and outcomes for all concerned. In this context, this unit introduces students to the notion of practice-led research and research-led practice and provides them with the opportunity to use practice-based projects as vehicles for further developing discipline knowledge as well as advanced critical enquiry skills. In undertaking the unit, students will collaborate with a project supervisor and prepare an interim and final report and seminar on the project.

Credit points: 12  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB801 PROJECT 1
This unit is usually taken in the final year of study. Students complete an individual project involving the application of skills and knowledge attained during the earlier years of their degree program. For some students, this unit will be taken one of two ‘project’ units related to the same student project; in such cases this unit may be a pre-requisite or co-requisite to the second unit (or a follow-on from the first unit). The final ‘deliverable’ for this unit may vary for each discipline and details will be provided in lectures/tutorials and on the Blackboard website.

Equivalents: CEB411, CEB420, CNB434, EEB781-1, EEB889-1  Credit points: 12  Contact hours: 2 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB802 PROJECT 2
This unit is usually taken in the final year of study, and is only taken by students completing a two unit project. Students complete an individual project involving the application of skills and knowledge attained during the earlier years of their degree program. This unit will be taken as the second of two ‘project’ units related to the same student project.

Equivalents: CEB415, EEB782-2, EEB889-2  Credit points: 12  Contact hours: 2 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1 and 2013 SEM-2

BEB901 RETROFITTING FOR SUSTAINABILITY
THIS UNIT IS OFFERED IN ODD-NUMBERED YEARS ONLY.
This unit will provide students with an opportunity to examine in depth current data on the condition of built and natural environments and the well-being of people living...
within these environments, worldwide and in Australia. Special attention will be given to problems observed in the built environment, such as greenhouse gas emissions, population increase, over consumption and resource depletion including water shortages, coastal degradation and urban sprawl.

**Credit points:** 12    **Campus:** Kelvin Grove    **Teaching period:** 2011 SEM-1

**EBE902 GREENING THE BUILT ENVIRONMENT**

**THIS UNIT IS OFFERED IN EVEN-NUMBERED YEARS ONLY.**

This unit presents the challenges and opportunities for built environment professionals to contribute to a sustainable society. It introduces a paradigm shift in environmental design from reducing negative environmental impacts to generating net positive impacts. It shows how, with a new approach to design, development can be a sustainability solution. Positive Development would increase overall social and natural capital beyond that which existed on site before settlement. Building design principles and eco-technologies are surveyed that address sustainability issues at the level of buildings, building components and materials. In addition, green practitioners will explain how they have dealt with impediments to sustainable development in an evening lecture series.

**Credit points:** 12    **Campus:** Kelvin Grove

**EBE903 GREENHOUSE SOLUTIONS**

**THIS UNIT IS OFFERED IN ODD-NUMBERED YEARS ONLY.**

The unit aims to briefly introduce students to barriers facing the adoption of greenhouse abatement strategies and the methods by which these barriers can be overcome. Finally, the unit will describe how energy, transport and urban systems, like the climate system itself, have great inertia: they take decades to change. This means that in order to achieve significant reductions in greenhouse emissions, and to avoid the worst effects of climate change, early planning and action is critical for these systems.

**Credit points:** 12    **Campus:** Kelvin Grove    **Teaching period:** 2011 SEM-2

**EBE904 ECO-INNOVATION FOR SUSTAINABILITY**

**THIS UNIT IS OFFERED IN EVEN-NUMBERED YEARS ONLY.**

This is one of the units in a Minor in Sustainability designed to equip you to address fundamental social, ecological and economic challenges facing society using a systems design approach. This unit focuses on ‘eco-innovation’, which includes institutional, technological and spatial design solutions that increase the ecological base, human health, well-being and equity as well as reducing total resource consumption and waste. New strategies are explored which can help find leverage points where small actions or investments generate system-wide improvements.

**Credit points:** 12    **Campus:** Gardens Point

**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:** BSBX119, CTB119    **Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Gardens Point and Caboolture    **Teaching period:** 2013 SEM-1, 2013 SEM-2 and 2013 SUM

**EDB007 CULTURE STUDIES: INDIGENOUS EDUCATION**

Numerous government reports and recent discussions about reconciliation have called for an increased commitment to Indigenous education in Australia. Teachers are increasingly being asked to improve their skill, knowledge and understanding to teach Indigenous students, and to teach curricula which incorporates Indigenous viewpoints on social, cultural and historical matters. This unit begins with an analysis of the students’ own cultural place in the Australian context and afterwards moves towards an understanding of Aboriginal and Torres Strait Islander perspectives on history and contemporary issues, and an understanding of why Aboriginal and Torres Strait Islander students have been so disadvantaged by the Australian education system.

**Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Internet, Kelvin Grove and Caboolture    **Teaching period:** 2013 6TP4 and 2013 SEM-2

**EDB038 INDIGENOUS AUSTRALIAN CULTURE STUDIES**

This unit encourages an appreciation of the two distinct indigenous cultures of Australia and how external forces to Aboriginal and Torres Strait Islander cultures caused social, economic and political changes. It looks at traditional family life and organisation.

**Credit points:** 12    **Campus:** Kelvin Grove
EDB039 INDIGENOUS POLITICS AND POLITICAL CULTURE
This unit examines issues and influences underlying the world of indigenous politics: political representation; land rights; health; education; community development; criminal justice; culture and heritage. This unit has an Australian focus with New Zealand and North American comparisons.
Credit points: 12   Campus: Kelvin Grove

EDB040 INDIGENOUS KNOWLEDGE: RESEARCH ETHICS AND PROTOCOLS
This unit provides students with a critical examination of the major ethical and moral issues arising from the designing and conducting of research 'on/in' Australian Indigenous people/communities or issues. The unit examines the calls by Indigenous researchers for the decolonising of research methods - a process which critically examines the historical and philosophical bases of Western research and the frustrations of Indigenous researchers with various Western paradigms, academic traditions and methodologies.
Credit points: 12   Campus: Kelvin Grove   Teaching period: 2013 SEM-2

EDB041 INDIGENOUS AUSTRALIA: COUNTRY, KIN AND CULTURE
This unit aims to expand understanding of issues of importance to Indigenous people and to relate those issues to the practices in human service agencies. The Oodgeroo staff and leaders from the Indigenous community will work with staff from Social Work and Human Services in presenting this unit.
Antirequisites: SWB109   Credit points: 12

EDN612 CONDUCTING INNOVATIVE EDUCATIONAL RESEARCH
The unit aims to enhance capacities for undertaking research in educational and other learning contexts that is innovative in both its focus and its approach. The unit engages students in a comprehensive examination of relevant research theory and practical application.
Prerequisites: EDN611   Credit points: 12   Campus: Internet and Kelvin Grove   Teaching period: 2013 SEM-1 and 2013 SEM-2

ENB110 ENGINEERING STATICS AND MATERIALS
This unit introduces you to forces and moments between rigid bodies and to the properties of steel. This knowledge will help you to understand how major infrastructure systems (e.g. bridges, skyscrapers, roads, factories), mechanical systems (e.g. engines, turbines, pumps, vehicles), and electrical systems (e.g. power stations, transmission lines, motors) are designed and built. This unit is one of four first year units covering fundamental engineering principles that you will need in your profession.
Credit points: 12   Contact hours: 4 per week   Campus: Gardens Point   Teaching period: 2013 SEM-1 and 2013 SEM-2

ENB120 ELECTRICAL ENERGY AND MEASUREMENTS
This unit introduces you to basic electrical circuit concepts. It requires you to perform circuit analysis, circuit synthesis, and the measurement and testing of relevant quantities within circuits.
Credit points: 12   Contact hours: 3 per week   Campus: Gardens Point   Teaching period: 2013 SEM-2 and 2013 SUM

ENB212 STRENGTH OF MATERIALS
This unit introduces the analysis of stress and strain in simple engineering components and systems such as uniaxial and bending stresses, deflection of beams, torsion, thin walled structures, combined loading, yield criteria, and introduces the finite element method (FEA).
Prerequisites: ENB110 or ENB101 and ENB104   Credit points: 12   Contact hours: 5 per week   Campus: Gardens Point   Teaching period: 2013 SEM-1

ENB221 FLUID MECHANICS
This unit introduces the basic concepts of fluid mechanics and applies them to some simple engineering problems.
Assumed knowledge: MAB126 or MAB180 or MAB131, and ENB101 or ENB110 are assumed knowledge.  
Credit points: 12   Contact hours: 4 per week   Campus: Gardens Point   Teaching period: 2013 SEM-2

ENB222 THERMODYNAMICS 1
Thermodynamic behaviour of substances; theory and application of the 1st and 2nd laws of thermodynamics; thermodynamic cycles, including gas cycles, vapour power cycles and refrigeration cycles; gas-vapour mixtures and the principles of air-conditioning; fuels and combustion.
Assumed knowledge: MAB127 or MAB182 or MAB132, and ENB130 or PCB136 are assumed knowledge.  
Credit points: 12   Contact hours: 4 per week   Campus: Gardens Point   Teaching period: 2013 SEM-1

ENB231 MATERIALS AND MANUFACTURING 1
Materials and their engineering applications, Manufacturing systems and technology, material properties and manufacturing, material selection, failure, graphical communication.
Assumed knowledge: ENB104 or ENB110 is assumed knowledge.  
Credit points: 12   Contact hours: 4 per week   Campus: Gardens Point   Teaching period: 2013 SEM-1

ENB240 INTRODUCTION TO ELECTRONICS
Module Electronics A provides a basic understanding of the characteristics and operation of discrete semiconductor
components. Electronic circuit design is introduced with emphasis on the small signal low and high frequency response of those circuits. Module Digital Electronics gives students a good grounding in the basic principles of digital design, with particular regard to the fundamentals of digital number systems, Boolean algebra, combinational and sequential logic design.

**Prerequisites:** ENB103 or ENB120  
**Equivalents:**  
**EEB312**  
**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

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**ENB246 ENGINEERING PROBLEM SOLVING**

This unit introduces students to the use of computers as tools for solving engineering problems. MATLAB is introduced as a numerical computing environment with the capacity to support complex mathematics and to be programmed to solve specific engineering problems. Stand alone application development using C++ is introduced as a means of exposing students to the high and low level computer programming concepts that are necessary to the implementation of engineering solutions in hardware specific programming environments.  

**Assumed knowledge:** MAB126 or MAB180 or MAB131, and ENB103 or ENB120 is assumed knowledge.  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

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**ENB250 ELECTRICAL CIRCUITS**

This unit introduces you to electrical circuit analysis. It shows how to determine the transient and steady state solution in single and three phase circuits as well as the interaction of fluxes and currents in transformers and electrical machines.  

**Prerequisites:** ENB120  
**Antirequisites:** ENB103  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

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**ENB270 ENGINEERING MECHANICS OF MATERIALS**

This unit introduces calculating the stress produced in various members of a structural system due to the forces applied to them, and how to determine the design specifications (size and shape) of the members to withstand the forces to prevent the structural system failing.  

**Prerequisites:** ENB101 or ENB110  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

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**ENB272 GEOTECHNICAL ENGINEERING 1**

Soil mechanics is a part of geotechnical engineering, soil types, their description, classification and engineering properties. The unit includes the following: granular and cohesive soil classification systems; volume and mass components; density and air voids; determination of soil geostatic vertical pressures; pore water pressures and effective stress; permeability theory and fluid seepage in soil, with erosion and piping analysis; soil shear strength assessment and application to retaining wall lateral pressures; retaining wall design; slope stability analysis and stabilisation. Computer simulation and analysis programs are used where appropriate.  

**Assumed knowledge:** ENB102 or ENB270 are assumed knowledge  
**Equivalents:** CEB209, CEB232  
**Credit points:** 12  
**Contact hours:** 6 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

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**ENB276 STRUCTURAL ENGINEERING 1**

This unit includes the following: development of the method of moment distribution and its application in analysis of continuous beams and frames; theory of influence lines and its application to determine the effects of moving loads on beams and trusses; 'pattern loading' on frames and continuous beams; behaviour of reinforced concrete members; applications in the design of beams and columns.  

**Prerequisites:** ENB102 or ENB270  
**Assumed knowledge:** ENB273 and ENB271 is assumed knowledge.  
**Equivalents:** CEB215  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

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**ENB280 HYDRAULIC ENGINEERING**

This unit primarily provide a basic understanding of hydraulic (fluid) principles and an understanding of the use of these principles in engineering applications. The main topics to be covered are: Units and properties of fluids, Forces in static fluids, Buoyancy, Kinematics and Continuity, The energy equation and the momentum equation, Similitude and dimensional analysis, Lift and drag, Frictional flow in pipes, Application of pipe resistance formulae, Fitting.  

**Assumed knowledge:** MAB126 or MAB180 or MAB131, and ENB101 or ENB110 are assumed knowledge  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

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**ENB379 TRANSPORT ENGINEERING AND PLANNING APPLICATIONS**

The environmental engineer must be familiar with the role of each transport mode in the overall transport task, along with current issues associated with each mode. This must be overlaid by an understanding of the system for planning and management of transport projects and systems, particularly in context with economic, environmental and social attributes. This unit provides students who wish to pursue a career in environmental engineering with an understanding of these areas. The unit also includes case studies covering the environmental impact for some of the urban and rural transport and infrastructure projects especially in the area of community consultation.  

**Assumed knowledge:** ENB274 and ENB372 are assumed knowledge.  
**Equivalents:** CEB419  
**Credit points:** 12
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**ENB441 APPLIED IMAGE PROCESSING**
The aim of this unit is to introduce the fundamentals and applications of image processing to the students. The unit covers topics such as image acquisition, image representation, image enhancement, image segmentation, and image filtering. These topics will be introduced using a project based approach with applications to engineering practical problems.  
**Prerequisites:** ENB342  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**ENB448 SIGNAL PROCESSING AND FILTERING**
This unit gives a comprehensive introduction to the representation and processing of signals distorted or corrupted by noise, and the systems needed to process them. Techniques to enhance, detect, classify and estimate useful information from the signals in the presence of noise and other distortions will be presented. The methods presented will be tested on real signals drawn from different engineering applications, such as speech signals, image signals, biomedical signals and signals in communications systems.  
**Prerequisites:** ENB342  
**Assumed knowledge:** MAB233 is assumed knowledge.  
**Equivalents:** EEB941  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**ENB474 FINITE ELEMENT METHODS**
The Finite Element Method (FEM) is 20th century’s answer to treating complex problems, which hitherto remained impossible to solve, in several areas of engineering such as structural, geotechnical, electrical, heat conduction, etc. The applications of this powerful computer based method has rapidly extended to cover several areas of engineering. In the structures area, the displacements and stresses in complex concrete connections, dams, deep beams with openings, shell structures, etc., can only be obtained by finite element analysis. Basic theory of FEM and its features such as engineering actions, modelling techniques, choice of elements, boundary conditions and input data will be covered in this unit. It aims in equipping engineers with skills to apply FEM effectively in structural, geotechnical and water engineering problems.  
**Prerequisites:** ENB475  
**Assumed knowledge:** ENB102 or ENB270 are assumed knowledge.  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**KIB103 INTRODUCTION TO WEB DESIGN AND DEVELOPMENT**
This unit provides an introduction to theories and skills underpinning the application of multimedia technology with the Creative Industries, providing a foundation of conceptual and practical skills related to contemporary modes of electronic hypermedia production, communication and publishing.  
**Antirequisites:** INB271, KIP403  
**Equivalents:** KIB807, KKB007, KKB818  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Kelvin Grove  
**Teaching period:** 2013 SEM-1

**MAB126 MATHEMATICS FOR ENGINEERING 1**
Building upon the foundations established in MAB125 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 the discipline of engineering. The formulation and solution of such problems is supported by appropriate advanced mathematical concepts used for function approximation, differentiation and integration. The unit is located in first year for application in core engineering units throughout the rest of the course. Undertaking this unit will allow you to develop your problem solving skills, especially in the context of mathematical techniques applied to ordinary differential equations used to model engineering relevant problems.  
**Antirequisites:** MAN121  
**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics C (or equivalent) or MAB125 or MAB180 or MAB120 is assumed knowledge.  
**Equivalents:** MAB111, MAB121, MAB131, MAB182  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1, 2013 SEM-2 and 2013 SUM

**MAB210 PROBABILITY AND STOCHASTIC MODELLING 1**
This unit is intended for all mathematics degree students, all double degree students with mathematics, secondary education students with mathematics as a teaching area, and quantitatively-oriented students in other courses, particularly in Science, Information Technology, Engineering and areas of Business. The unit will provide you with fundamental skills and operational knowledge for all further study in statistics, and highly relevant foundations for other areas of mathematics such as mathematical modelling and operations research. The unit will also help you develop fundamental problem-solving skills in statistics and mathematics.  
**Prerequisites:** MAB121 or MAB122. MAB121 or MAB122 can be studied in the same teaching period as MAB210  
**Antirequisites:** MAN210  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1 and 2013 SEM-2
MAB314 PROBABILITY AND STOCHASTIC MODELLING

This unit includes: models for stochastic processes and statistical methods, which have applications in engineering, information technology, finance, and physical and life sciences. Markov chains; random walks; branching processes; queueing processes; long-term behaviour of processes; use of generating functions; bivariate and conditional distributions; transformations of random variables; beta and gamma distributions; mixture distributions; order statistics, minimum and maximum. 
Prerequisites: MAB122 and MAB210 
Credit points: 12 
Contact hours: 4 per week 
Campus: Gardens Point 
Teaching period: 2013 SEM-1

MAB524 STATISTICAL INference

This unit includes: maximum likelihood estimation, confidence intervals and hypothesis tests, introduction to Bayesian inference, prior and posterior distributions, Bayesian inference for binomial data, Poisson count data and normal data, simulation techniques for sampling from distributions. Use of software Matlab and R. 
Prerequisites: MAB314 
Credit points: 12 
Contact hours: 4 per week 
Campus: Gardens Point 
Teaching period: 2013 SEM-1

MAB536 TIME SERIES ANALYSIS

Data in business, economics, engineering and the natural sciences often occur in the form of time series. Time Series Analysis provides models and methods for the analysis of such series of correlated observations. The ability to forecast optimally, to understand causal relationships between variables, and to analyse dynamic systems is of great practical importance. For example, optimal sales forecasts are needed for business planning, transfer function models are needed for improving the design and control of a process plant, and vector time series models are used to represent the relationships and interactions of macroeconomic variables in an economy. This unit is concerned with the building of time series models and the use of such models for practical applications such as optimal forecasting, simulation, causality analysis, and analysis of dynamic systems. 
Prerequisites: MAB314 and MAB414 
Credit points: 12 
Contact hours: 4 per week 
Campus: Gardens Point 
Teaching period: 2013 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 
Credit points: 12 
Contact hours: 3 
Campus: Gardens Point and Caboolture 
Teaching period: 2013 SEM-1 and 2013 SEM-2

PYB110 PSYCHOLOGICAL RESEARCH METHODS

This unit includes the following: an overview of the purposes and strategies of research; elementary research design; operationalising variables; descriptive statistics; distributions; measures of central tendency and spread; standard scores and percentiles; understanding relationships between variables through correlation and regression; an introduction to hypothesis-testing procedures using t-tests. 
NOTE for Summer 2010 students: 
Teaching will not commence until January 2011. 
Students should set aside the full 2 weeks + 1 day for the unit. Final exam will be on Friday 28 January. 
Credit points: 12 
Contact hours: 3 per week 
Campus: Kelvin Grove 
Teaching period: 2013 SUM-2 and 2013 SEM-2

UDB100 URBAN DEVELOPMENT AND SUSTAINABILITY

This unit introduces you to the essential professional skills and practises common to the fields and disciplines of urban development. 
Through this unit you will have an opportunity to develop and demonstrate professional knowledge in your specialized area while also developing foundation academic and university skills that you will use to enhance and support your further studies. Concepts relating to professional practice, ethics, information management and sustainability will be addressed through-out the unit. Information from this unit will be consolidated in UDB200. 
Credit points: DEB100,ENB100 
Contact hours: 3 per week 
Campus: Gardens Point 
Teaching period: 2013 SEM-1

UDB101 STEWARDSHIP OF LAND

This interdisciplinary unit will introduce students to the characteristics of land and land tenure with a focus on land use and property rights. The particular issues of native title,
land contamination, heritage and alternative utility will be covered. Thereafter the property development process will be described in general terms and emphasis placed on the impact of environmental and social factors on the financial evaluation. The final component will cover the management of land, both urban and regional. Case studies will demonstrate the part that each discipline plays in the stewardship of land and its development.

**Equivalents:** CNB105  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB102 APPLIED LAW**
Introduces the fundamental principles and practices of Australian governance as they affect the built environment professions. The relevance of government policies, laws and regulations and aspects of Tort, Contract and Land and Environmental laws applicable to the Development and Construction processes are examined in context.

**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB104 URBAN DEVELOPMENT ECONOMICS**
This unit will introduce microeconomic and macroeconomics concepts applied to urban and regional development. The unit will initially focus on demand, supply and determination of prices, and other important microeconomic concepts, at the level of an individual development. Here, the value of microeconomics in explaining aspects of development is demonstrated using local and national examples. In doing so, this unit will also help to deepen the appreciation of the key steps in development and the role of the main actors. Since anyone development project does not occur in a vacuum, the unit will then broaden to consider the impact of changes in the national and local economy on land use and development, including business cycle, monetary and fiscal policy.

**Equivalents:** BSB113,BSD113  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB110 RESIDENTIAL CONSTRUCTION AND ENGINEERING**
You learn to read plans and build a house by studying construction theory and legislation, visiting building sites, and sketching construction details. Focus on the four traditional methods of construction, brick veneer, cavity brick, block and timber, evolution of building, Building Code of Australia and Australian Standards; methods of construction; foundation and footings; linings; claddings; windows; doors; joinery; staircases; roof coverings; balanced cut and fill; services; retaining walls; acoustic and fire safety requirements; specifications for residential construction; protection to the public during construction; temporary support and demolition of structures; energy efficiency design; building defects and failures.

**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB111 ENGINEERING CONSTRUCTION MATERIALS**
The choice of material and the reliance on the material being “fit for purpose” is essential to the success of the building project. This unit provides you with an introduction to building materials. We will cover the structural and non-structural materials used in the construction process and focus on the basic properties, construction applications, behaviour, strength, durability, suitability, and limitations.

**Equivalents:** CNB102  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB112 PROFESSIONAL STUDIES 1**
Assignment-based project orientated group work where you design and document a new dwelling preparing a full design of a single level brick-veneer type dwelling to a standard appropriate for building approval including architectural and structural design; construction materials; building services; statutory obligations and the building approval process; measuring and cost planning; contract administration; construction planning and site layout.

**Prerequisites:** UDB110  
**Equivalents:** CNB109  
**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB113 MEASUREMENT 1**
This unit introduces the scope of the role of the quantity surveyor working independently and for contractors. It examines the tendering process and the bill of quantities; the Australian standard method of measurement (rules, taking-off methodology, mensuration and formulae); measurement of various work sections (finishes, roofing, vacuum, the unit will then broaden to consider the impact of various work sections (finishes, roofing, vacuum, the unit will then broaden to consider the impact of changes in the national and local economy on land use and development, including business cycle, monetary and fiscal policy.

**Equivalents:** BSB113,BSD113  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB114 PROPERTY VALUATION 1**
This unit provides an introduction to property valuation fundamentals including value principles and concepts, market data and the methods of valuation, with particular focus on the valuation of residential property.

**Equivalents:** CNB194  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1 and 2013 SEM-2

**UDB161 INTRODUCTION TO PLANNING AND DESIGN**
This unit introduces students to basic principles of planning and urban design. Students learn about urban design principles such as legibility, permeability, robustness and
imageability of places. Students also investigate the planning issues facing cities and consider the complex problem-solving skills required to respond to these.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-1

**UDB162 HISTORY OF BUILT ENVIRONMENT**

This unit uses examples from the global development of human settlement to demonstrate the importance of interactions between the environment, society, and technology in shaping the built environment. Students will gain an appreciation of the important role played by history in forming the context for contemporary society, policy making, and design.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-1

**UDB163 LAND USE PLANNING**

The purpose of this unit is to examine the planning and management of public and private land. Unit topics include: different performance and prescriptive zoning methods; an overview of levels of planning agencies responsible for land use planning in Queensland; and the land development process and regulations that govern land use planning.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-2

**UDB164 POPULATION AND URBAN STUDIES**

This unit introduces the students to the demographic, economic, social and physical aspects of our cities to help understand the nature of cities we live in. The topics covered include: demographic and economic changes in cities, theoretical models of cities, issues such as social diversity, gentrification, masterplanned communities, and public spaces in cities.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-2

**UDB181 GEOSPATIAL POSITIONING AND GPS**

This unit will introduce students to skills and knowledge of spatial referencing, site measurement; use of maps and air photos. It will include introduction to map projections; concepts and theory of Global Positioning Systems; introduction to global and local coordinate systems; mission planning and data collection. The unit will highlight the importance of geospatial positioning applications in society.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-1

**UDB182 SURVEYING**

This unit provides a foundation in field instrumentation and survey computations; a framework for acquisition of a high level of knowledge and practical competence in plane survey computations; use of optical and electronic theodolites; EDM and total electronic station systems, and a focus on collection/presentation of pre-design contour and detail spatial information.

**Equivalents:** PSB640  **Credit points:** 12  **Contact hours:** 5 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-2

**UDB200 PROJECT PLANNING IN URBAN DEVELOPMENT**

This unit will enable you as a graduating Built Environment and Engineering professional to take active and positive steps to transform professional practice in ways that promote the sustainability of our planet, our economy and our society. As future professionals in the fields of Design, Urban Development and Engineering Systems, you will need to understand and apply the concepts of sustainability in your professional practice if we are to achieve sustainable development in the 21st Century.

**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-2

**UDB202 BUSINESS SKILLS**

This unit focuses on career preparation with a business orientation. Current popular business tools are assembled and critiqued. A sequential approach is used starting with characteristics of the Resume, business protocol and ethics, the business plan, assessing business risk and Professional Liability.

**Equivalents:** CNB228  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-2

**UDB210 COMMERCIAL CONSTRUCTION AND ENGINEERING**

The aim of this unit is to provide you with extensive theoretical knowledge to manage and supervise the construction of (1) low rise residential apartment buildings (2) commercial buildings i.e. shops, offices; and (3) industrial buildings. Focus on legislative requirements; on-site inspections; site management techniques; temporary works & construction plant requirements, labour; In-ground construction; External treatments (cladding); formwork; bracing and stability; services co-ordination; Landscaping; Environmental, building defects,. disabled access; universal design; load-bearing masonry; services co-ordination; internal fit-out; tilt panel construction; portal/steel frames.

**Prerequisites:** UDB110  **Equivalents:** CNB107  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2013 SEM-1

**UDB211 INTRODUCTORY STRUCTURAL ENGINEERING**

Structural engineering analysis examining structural principles, structural action, load paths and equilibrium. Structural characteristics are examined through first principles including tension, compression, bending and shear forces. Quantitative, qualitative techniques and
approximate methods are used as well as the use of computer software in structural analysis.

**Prerequisites:** UDB111 (can be enrolled in the same teaching period)  
**Equivalents:** CNB108  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB212 MEASUREMENT 2**
Measurement is a core skill among building professionals. This skill is particularly important in relation to the production of quantified documents for the purposes of tendering and estimating. This unit covers the following:
- Measurement of various work sections (concrete, formwork, reinforcement, groundworks, underpinning, tanking, structural steelwork, exterior elements, and bored piers);
- and the development and application of builders' quantities.

**Prerequisites:** UDB113  
**Equivalents:** CNB204  
**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB213 CONSTRUCTION ESTIMATING**
Estimating techniques to quantify cost; Fundamental elements of cost and methods of evaluating labour, materials and equipment to realistic levels of accuracy; Unit rate approach to assessing the base estimate for major trades; Assessment of offers from sub-contractors and implications for tendering with respect to risk, quality and ethical responsibilities; Functional estimating and the significance of method, time and assembly of information to estimating; Review of an estimate, determination of profit; letters of offer; Subsequent negotiations prior to award of a contract; application of estimating to variations and profit monitoring; Linking best value procurement assessment to outcome performance indicators (including tender evaluation criteria).

**Prerequisites:** UDB110, UDB113  
**Equivalents:** CNB305  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB214 PROFESSIONAL STUDIES 2**
Assignment-based project orientated group work where you design and document a commercial development from a project management perspective considering constructability drawing on your skills in estimating; planning; scheduling; site organisation; environmental planning & sustainable urban development. Focus on special construction techniques; reuse of buildings and building materials; durability of materials, minimisation and disposal of construction waste; construction practice; planning and use of appropriate forms of construction for various building sizes and types; community negotiations; statutory responsibilities including access for people with a disability.

**Prerequisites:** UDB112 or BEB200 or ENB200  
**Assumed knowledge:** UDB210 is assumed knowledge.

**Equivalents:** ENB274  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB215 BUILDING SERVICES ENGINEERING**
Fire Services: Fire detection, suppression and extinguishment; statutory requirements for maintenance of essential active fire services; Hydraulics Services: Building hydraulic services including water supply, fire protection and sanitary waste disposal systems. Mechanical Services: Air movement; Types of ventilation; Air-conditioning systems and heating; Installation procedures and the issue of confined spaces; Basis of design and effect of architectural style; Electrical Services: Transformers, sub-stations, switchboards, protection devices, lighting systems, stand-by generators, security systems; systems monitoring and energy management; vertical transportation systems. Energy Efficient Services: Examination of energy efficient design on services.

**Equivalents:** CNB203  
**Credit points:** 12  
**Contact hours:** 5 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB216 THE ENVIRONMENT AND THE QUANTITY SURVEYOR**
This unit will involve professional quantity surveying including image and status, fees, codes of ethics, professional competence and continuing professional development. In terms of employment, professional engagement in the workplace will be covered including terms of engagement, professional indemnity insurance, quality assurance and financial asset management. The work of quantity surveying takes place within a social and environmental context and this relates to the interactions between business and environmental interests including the natural environment, environment economics and ecologically sustainable development.

**Equivalents:** CNB209  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB240 PLANNING THEORY AND PROCESSES**
This unit is an introduction to the fundamental principles of urban planning control and regulation in Queensland. Property economists need to be aware of the history, development and current impact of planning regulation on property development and investment. This unit covers current development planning approval, assessments, conditions and appeals processes. Integration of economics, equity and social responsibility which include conservation and heritage protection and its impact on development and land are also discussed.

**Antirequisites:** UD40MJR-URBPLAN - Urban and Regional Planning Major  
**Equivalents:** CNB295  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2
Gardens Point  Teaching period: 2013 SEM-1

UDB241 PROPERTY LAW 1
A practicing property professional requires an understanding of real property law in order to optimise the utility of property assets and therefore the value of property assets. This unit covers aspects of real property law which impact on professional property practice in Queensland. 
Assumed knowledge: UDB102 is assumed knowledge.
Equivalents: CNB191  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1

UDB242 PROPERTY VALUATION 2
An understanding of valuation methodologies relating to commercial property assessment is central to the work of any property professional. This unit develops an understanding of the various methodologies and the application of these valuation methodologies to practical scenarios. This unit also further develops an understanding of the various market sectors and how the market impacts on the value of a property asset.
Prerequisites: UDB140  Equivalents: CNB292  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1

UDB243 PROPERTY ECONOMICS
The unit will relate macro and micro economics to the broad property markets. It will consider the practical impact of supply and demand factors on the different market sectors. The nature and complexities of property cycles are covered with specific reference to commercial and industrial property in Australia.
Prerequisites: UDB104  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1

UDB245 URBAN LAND STUDIES
The aim of the unit is to take the students’ fundamental knowledge of economic theory developed in earlier units and to apply that knowledge to the specific area of urban development. In particular we seek to develop in students an awareness of those economic imperatives which drive and shape urban form.
Prerequisites: UDB243  Equivalents: CNB291  Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2013 SEM-2

UDB246 PROPERTY FEASIBILITY STUDIES
Property economists play an important role in advising on the investment worth of property. As such the unit introduces students to assessment of property as an investment asset taking into account financing and taxation arrangements in addition to risk and return measures.
Prerequisites: UDB242  Equivalents: CNB392  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-2

UDB247 PROPERTY VALUATION 3
It is part of the role of a Property Valuer to perform valuations for statutory purposes and to represent those valuations in the capacity of an expert witness. It is imperative that you have the necessary knowledge to undertake statutory valuations and have an understanding of the role of a Valuer as an expert witness. This unit will enhance the knowledge and skills you have developed in prior valuation units and apply this in the statutory and special use property valuation context.
Prerequisites: UDB241 and UDB242  Equivalents: CNB391  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-2

UDB266 PLANNING PROCESSES AND CONSULTATIONS
Students learn how land uses are generated and can be planned. They study the logic, role and methods of successive stages of planning processes including aims, information analysis and synthesis, evaluation, strategy development, monitoring and review. They learn how to consult widely in the community and with other professionals to develop and apply flexible and widely relevant planning processes.
Prerequisites: (UDB163 and UDB164) or ENB274 or DE40MJR-LNDARCH - Landscape Architecture Major  Equivalents: PSB433  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-1

UDB267 DEVELOPMENT ASSESSMENT AND INFRASTRUCTURE
The aim of this unit is to provide students with a grounding in the issues and skills related to the assessment of development applications and planning related to infrastructure. The unit will be conducted in two sections. The first will introduce students to the relevant legislation, procedures, and techniques associated with development assessment. The second will give students an understanding of issues related to the provision and maintenance of technical and social infrastructure, with particular reference to the importance of sustainability and the emergence of new technology and systems.
Prerequisites: UDB163 or DE40MJR-LANDARC - Landscape Architecture Major  Equivalents: PSB445  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2013 SEM-2

UDB281 GEOGRAPHIC INFORMATION SYSTEMS
This unit investigates the basic concepts of geographic information systems. Topics to be covered include components of GIS, spatial databases, data acquisition,
reference frameworks, use of photographs and images, spatial analysis and graphic output design issues. The unit will highlight the importance of geographic information systems the unit will highlight the importance of geospatial positioning applications in society.

**Equivalents:** PSB631 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2013 SEM-1

**UDB282 REMOTE SENSING**

This unit includes the following: history and principals of remote sensing; types of imagery, image interpretation, satellite systems; supervised and unsupervised image classification; interpretation, analysis and presentation of data; applications in the earth sciences.

**Equivalents:** PSB655 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2013 SEM-2

**UDB301 RESEARCH METHODS**

Research Methods will introduce students to the range of methods and techniques that may be utilised in examining questions related to professional practice. A comprehensive overview of research methods will be provided in order that students are able to contribute to research as a part of their professional practice, and to enable them to critically analyse research findings and publications.

**Prerequisites:** Completion of 216cp in UDB units  
**Equivalents:** CNB395 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2013 SEM-1

**UDB302 DEVELOPMENT PROCESS**

This unit brings together concepts gained on strategic evaluation, risk, time management, organisational behaviour, planning, construction and development feasibility analysis. It places this knowledge in a total project context and provides you with an understanding of the processes involved in property development from conception to completion and beyond.

**Credit points:** 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2013 SEM-2

**UDB310 HIGHRISE CONSTRUCTION AND ENGINEERING**

Students learn how to construct a high rise structure from the basement to the roof. Focus on protection to the public during construction, temporary support; demolition; temporary services; deep excavation and foundations; retention and shoring systems; structural components; multilevel formwork; interaction of building components, systems and services; common building faults and failures and rectification; alternative forms of external cladding; waterproofing problems.

**Prerequisites:** UDB210  
**Equivalents:** CNB201

**UDB311 STRUCTURAL ENGINEERING DESIGN**

Study and analysis of engineering components and systems, to develop a sound understanding of how a building achieves structural stability and equilibrium through its load paths. Content includes: Basic structural member design for tension, compression, bending and shear loads through detailed examination through the use of relevant Australian Standards as the basis for examination. Emphasis is on approximate or “first order of magnitude” techniques suitable for estimating or checking purposes. Structural systems analysis; including trusses and retaining walls with a mix of qualitative and quantitative techniques. Construction stability is examined in detail including cranes, shoring, scaffolding, and slings.

**Prerequisites:** UDB111 and UDB211  
**Equivalents:** CNB302 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2013 SEM-1

**UDB312 CONTRACT ADMINISTRATION**

The administration of construction contracts represents one of the core applications for both construction managers and quantity surveyors. In order to appreciate some of the commercial implications of contract administration you will study administrative implications for both parties to the contract.

**Equivalents:** CNB302 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2013 SEM-1

**UDB313 PROGRAMMING AND SCHEDULING**

This unit covers the following: Project time and resource planning techniques such as bar charts, critical path networks (precedence, time scales, and activity on arrows); Line of balance; Resource allocation and levelling; Schedule updates and progress control; Delays and claims analysis. Applications of computer-based project planning software will form an important part of the study in this unit.

**Equivalents:** CNB335 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2013 SEM-1

**UDB314 STATUTORY CONSTRUCTION LAW**

Commercial Law. Sale of goods; Hire purchase; Trade practices; Negotiable instruments; Insurance law; Partnership law and company law; Bankruptcy and liquidation; Arbitration (the agreement, appointment of an arbitrator; Conduct of an arbitrator; Powers and duties; Enforcement of an award, costs; Alternative dispute resolution. Building Law; Study of the Building Code of Australia and Building Regulations, which control the design, construction of building works; emphasis on all building law; a study of the Acts Interpretation Act, Town
Planning Acts; etc.

**Prerequisites:** UDB110, UDB210, UDB310, and UDB215

**Equivalents:** CNB309  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB316 COST PLANNING AND CONTROL**

Interrelationship between construction industry and economy; Fundamental principles of cost management (design and construction cost planning and cost control); Nature and purpose of cost planning and cost control systems; Contract costing (historical accounting) and anticipatory (forecast final cost / value); Design economics, cost and value concepts, cost information systems, cost modelling, cost analyses, cost indices, cost data, cost implications of design variables; Life cycle costing and modelling including design knowledge in virtual environments; Value management, including energy efficiency in buildings, and value alignment process for project delivery; Asset management and building maintenance; Risk management in cost planning and cost control.

**Equivalents:** CNB307  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB341 PROPERTY FINANCE**

Property is a major asset class of available investment options. Due to its distinct characteristics, debt and equity financing plays a major role in investment decisions. As such, the unit develops students' understanding of property investment and financing techniques and the place of property assets within the capital markets.

**Prerequisites:** UDB242  
**Assumed knowledge:** UDB246  
**is assumed knowledge**  
**Equivalents:** CNB297  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB344 PROPERTY AND ASSET MANAGEMENT**

With an increasing number of companies and institutions now leasing property rather than direct ownership, the management of these assets is becoming a crucial aspect of business practice. This unit will cover the physical and financial aspects of commercial, retail and industrial property management and the role of property as a strategic real estate asset. The area of Corporate Real estate and Asset management will also be covered in the unit.

**Prerequisites:** UDB242  
**Assumed knowledge:** UDB244  
**is assumed knowledge**  
**Equivalents:** CNB393  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB368 URBAN DESIGN**

This studio unit develops skills in urban design analysis and intervention through the transformation of urban design theory into policies and design proposals. Students are introduced to the production of urban design instruments (such as strategies and frameworks) and effective communication of desired urban design outcomes. Where possible, students participate in live projects, with inputs from industry, government and communities.

**Prerequisites:** UDB265  
**Assumed knowledge:** Basic skills in WLMM, Illustrator,SketchUp, Site Analysis is assumed knowledge  
**Equivalents:** PSB451  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB369 NEGOTIATION AND CONFLICT RESOLUTION**

This unit introduces planning students to the theory and practice of negotiation and conflict resolution. The aim is that students will develop their ability to change their perspective on conflict by seeing it as an inevitable and sometimes valuable part of planning. Students will learn to develop empathy for those they are in conflict with while also communicating their own needs assertively. Content includes key principles of conflict resolution, and practical mediation/negotiation techniques.

**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1

**UDB370 ENVIRONMENTAL PLANNING AND MANAGEMENT**

This unit introduces environmental planning and management issues, policies, and methods relevant to your future practice as a planner, engineer, designer, or other built environment professional. As part of a multi-disciplinary team, you will participate in investigation of a contemporary case study, engaging in creative problem-solving and synthetic thinking incorporating skills and knowledge from prior units framed within new perspectives. By the end of the unit, you will have a firm grasp on a range of current environmental planning and management issues, and a framework for assimilating and addressing environmental policy in your future practice.

**Equivalents:** PSB462  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-2

**UDB381 GEOSPATIAL MAPPING**

This unit will provide the student with a sound knowledge and understanding of image mapping principles (including photogrammetry) and processes as well as practical skills and understanding required to collect spatial information and to produce fundamental mapping products. In addition this unit will provide the skills and knowledge of the principles and characteristics of cartographic communication, surface modelling techniques and digital mapping.

**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2013 SEM-1
UDB387 SPATIAL AND LAND INFORMATION MANAGEMENT
This unit provides you with an understanding of the spatial data infrastructure that will increasingly underpin decision making in diverse areas of development including resource management; urban and rural planning; cadastral administration and facilities management. The unit will provide an introduction to the concepts of a spatial data system planning overview, system implementation, and standards, legal issues, and knowledge-based techniques. **Prerequisites:** UDB281 **Equivalents:** PSB612 **Credit points:** 12 **Contact hours:** 4 per week **Campus:** Gardens Point **Teaching period:** 2013 SEM-1

UDB388 SPATIAL ANALYSIS PRACTICE
This unit expands a student's knowledge in the field of spatial information science within the framework of a practical exercise focussing on advanced spatial analysis techniques. This approach facilitates exposure to and the incorporation of emerging processes of acquisition, validation, storage, extraction, analysis and presentation of spatial information. A geographic information system environment is utilised to provide a practical introduction to industry practices and client expectations. This unit will provide students with enhanced knowledge of the extent, theory and practice of spatial information science and an enhanced ability to define and solve problems associated with manipulation of spatial information systems to meet client expectations. **Prerequisites:** UDB281 **Equivalents:** PSB654 **Credit points:** 12 **Contact hours:** 4 per week **Campus:** Gardens Point **Teaching period:** 2013 SEM-2

UDB410 STRATEGIC CONSTRUCTION MANAGEMENT
UDB410 is a capstone construction management unit bringing together all the skills you have learnt so far in your UD40 construction management course. Construction Managers require a strategic focus on site management, business and corporate responsibilities to manage time, cost, quality and safety on a construction project. UDB410 Construction Management is the last of a series of construction units UDB110, UDB210, UDB310 and consolidates skills students have learned throughout their degree to advance to a work-ready construction manager. **Prerequisites:** UDB310 or Admission into BN85 or Admission into UDBXSJM-CONSMGT **Equivalents:** CNB336 **Credit points:** 12 **Contact hours:** 4 per week **Campus:** Gardens Point **Teaching period:** 2013 SEM-2

UDB420 PROJECT ADMINISTRATION
This unit provides an introduction into project administration in the building construction industry. It will prepare you for the administrative and contractual interactions that occur between the Contractors and Sub-contractors during a