Graduate Certificate In Built Environment and Engineering (BN85)

Year offered: 2010
Admissions: Yes
CRICOS code: 060808G
Course duration (full-time): 1 semester
Course duration (part-time): 2 semesters
Domestic fees (indicative): 2010: Full fee tuition $11,000 (indicative) per semester
International Fees (indicative): 2010: $11,000 (indicative) per semester
Domestic Entry: February and July
International Entry: February and July
Total credit points: 48
Standard credit points per full-time semester: 48
Course coordinator: Associate Professor Mark Ho (replacing Prof Jay Yang from September 2010)
Discipline coordinator: Associate Professor Bambang Trigunarsyah (Course Leader) - Please refer course specific enquiries to Course Leader.
Campus: Gardens Point

Overview
This course serves as a preparation and pathway program for students wishing to enter a masters program in the Faculty of Built Environment and Engineering. It is particularly aimed at students with either a three-year undergraduate degree, or a degree in a different area to the masters of their choice.

Entry Requirements
A four-year full-time bachelor degree in a relevant discipline area; or a three-year full-time diploma and three or more years of relevant professional experience in a relevant discipline; and a grade point average of 5.0 or more (on a 7-point scale) in that study, or an equivalent qualification determined by the Faculty. English language requirements for the course are an English Language Proficiency level in accordance with QUT requirements (IELTS score of 6.0 with no sub-band below 6.0) if English is not your first language.

If requested, supply documentation of professional work experience as detailed in Completing the PG Form.

Career Outcomes
The Graduate Certificate in Built Environment and Engineering does not provide any specific career path. It is offered only as an alternative entry pathway to masters courses in the Faculty of Built Environment and Engineering.

International Student Entry
International students must maintain an enrolment program that will allow them to complete their course within the specified timeframe of their eCoE (electronic Confirmation of Enrolment).

Special Note
The course structures are divided into two major categories: Standard program and UD50 Articulation program. All students, except those intending to advance to UD50 Masters of Urban Development (Urban and Regional Planning), must follow the standard program.

Further Information
Faculty of Built Environment and Engineering - Phone +61 7 3138 1433, email: bee.enquiries@qut.com

Standard Course structure - February Entry and July Entry

Full-time Structure - Year 1, Semester 1
- BEE Undergraduate Unit 1
- BEE Undergraduate Unit 2
- Other Faculty Postgraduate Unit A
- Other Faculty Postgraduate Unit B
All units to be approved by Postgraduate Coordinator prior to enrolment.

Part-time Structure
A part-time course structure will require completion of 1 BEE undergraduate level unit and 1 Other Faculty postgraduate level elective unit each semester (50% of standard load as above.)

Postgraduate Level Electives
- AMN430 International Logistics Management
- EFN420 Introduction To Financial Management
- IFP100 Knowledge Transfer and Research Commercialisation
- INN311 Enterprise Systems
- INN221 Technology Management
- KIP401 Visual Communication
- MGN447 Managing in a Globalised Economy
- MGN423 Contemporary Strategic Analysis
Undergraduate Level Electives

Suitable for BN87 path.

BSB115 Management
ENB333 Operations Management
ENB336 Industrial Engineering
ENB432 Engineering Asset Management and Maintenance
Or consult with BN87 Course Leader.

Suitable for BN88 path.

ENB432 Engineering Asset Management and Maintenance
BEB114 Project Financing
UDB104 Urban Development Economics
UDB316 Cost Planning and Control
Or consult with BN88 Course Leader.

Suitable for BN89 path.

BEB110 Organising and Managing Project Team
BEB111 Managing Project Quality
BEB114 Project Financing
UDB213 Construction Estimating
UDB312 Contract Administration
UDB313 Programming and Scheduling
UDB316 Cost Planning and Control
UDB410 Construction Management
CNB402 Investment Theory
(CNB402 discontinued end 2009)
Or consult with BN89 Course Leader.

Suitable for DE50 path.

BEB902 Greening the Built Environment

BEB903 Greenhouse Solutions
BEB904 Eco-Innovation for Sustainability
DAB325 Architecture in the 20th Century
DAB525 Architecture and the City
CLB110 Environment and Society
OR
HHB127 Environment And Society
(HHB127 discontinued end 2009)
NRB600 Sustainable Environmental Management
(NRB600 discontinued end 2009)
Or consult with DE50 Course Leader.

[BE902, DAB325, and DAB525 are the most suitable.]

Suitable for EN50 path.

MOST SUITABLE:
ENB301 Instrumentation and Control
ENB342 Signals, Systems and Transforms
MECHANICAL ENGINEERING ORIENTED:
ENB311 Stress Analysis
ENB312 Dynamics of Machinery
ELECTRICAL ENGINEERING ORIENTED:
ENB350 Real-time Computer-based Systems
ENB352 Communication Environments For Embedded Systems
Or consult with EN50 Course Leader.

[Note: Some of these units have prerequisites which you will need to offer equivalencies for from your previous degree/s.]

UD50 Articulation Course structure - February Entry and July Entry

Full-time Structure - Year 1, Semester 1
Select 4 units from the list below:
UDN551 History of the Built Environment
UDN552 Population and Urban Studies
UDN553 Site Planning
UDN554 Planning Processes and Consultations
UDN555 Development Assessment and Infrastructure
UDN556 Development Process
UDN557 Urban Design
UDN558 Regional and Metropolitan Policy

Part-time Structure
A part-time course structure will require completion of 2 units (50% of standard load as above.)

UNIT SYNOPSES

AMN430 INTERNATIONAL LOGISTICS MANAGEMENT
This unit introduces international logistics functions and develops a strategic approach to international business transactions and integration focusing on supply chain management. The unit introduces traditional and contemporary logistics concepts and describes international logistics operations including global transport systems, inventory management, materials handling and information management. Global supply chain management cases and strategies are integrated throughout the unit.

Equivalents: IBN410 Credit points: 12  Campus: Gardens Point  Teaching period: 2010 SEM-1 and 2010 SEM-2

BEB110 ORGANISING AND MANAGING PROJECT TEAM
Project managers face the challenges of operating in a project environment characterized by high levels of uncertainty, cross-cultural teams, and global competition for competent human resources. These challenges can be met by developing a clear understanding of human factors in project management and by effective use of the human resource management skills that are required to inspire project stakeholders to work together in order to meet project objectives. This unit introduces the management of human resources in project, from planning, acquiring, developing and managing project team.

Credit points: 12  Campus: Gardens Point  Teaching period: 2010 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  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

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: 2010 SEM-2

BEB902 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: Gardens Point  Teaching period: 2010 SEM-1

BEB903 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: Gardens Point  Teaching period: 2009 SEM-2

BEB904 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.
BSB115 MANAGEMENT
The unit provides an introduction to the theories and practice of management and organisations. Emphasis is on the conceptual and people skills that are needed in all areas of management and in all areas of organisational life. The unit acknowledges that organisations exist in an increasingly international environment where the emphasis will be on knowledge, the ability to learn, to change and to innovate. Organisations are viewed from individual, group, corporate and external environmental perspectives.

Antirequisites: BSD115
Equivalents: CTB115
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point and Caboolture
Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

CLB110 ENVIRONMENT AND SOCIETY
People and nature interact to create distinctive and dynamic places and landscapes. Applied geography, with its integrating perspective and skills-base, helps us to understand this. The discipline hence addresses some of our most pressing social and environmental problems. Geography objectively views human activities, natural systems and their inter-relations in terms of consequent spatial patterns and impacts on landscapes, regions and places.

Credit points: 12
Campus: Kelvin Grove
Teaching period: 2010 SEM-2

CNB402 INVESTMENT THEORY
Construction Managers need to understand how property is valued and the different aspects of land that affect the value. This unit includes content on concepts of valuation, types of landed property, income, and ownership costs and capitalisation rates. Students are also provided with concepts of investment theory including NPV, IRR and MIRR.

Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point

DAB325 ARCHITECTURE IN THE 20TH CENTURY
Designers in any discipline should possess the ability to appreciate the history of art, design and architecture. In addition, they should be able to analyse developments in design history from multiple perspectives. This unit is a survey course of the history and theory of architecture from the beginning of the 20th century to the present. Teaching and learning takes place through three forms of structured activity: lectures, tutorials, and online.

Assumed knowledge: DAB220 is assumed knowledge.
Equivalents: ADB011
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

DAB525 ARCHITECTURE AND THE CITY
This unit aims to give a comprehensive overview of issues and techniques relevant to architectural design at an urban scale. Teaching and learning activities are spread across lectures, tutorials, and studio based activities.

Assumed knowledge: DAB325 and DAB420 are assumed knowledge.
Equivalents: ADB013
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

EFN420 INTRODUCTION TO FINANCIAL MANAGEMENT
This unit is a preliminary study of financial information and financial markets and it includes a number of techniques required for analysing financial information.

Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1 and 2010 SEM-2

ENB301 INSTRUMENTATION AND CONTROL
The unit introduces the student to classical control systems, analysis and synthesis, and implementation in an industrial control context. It introduces the principles of electrical measurements and instrumentation, sensors, PLC, DSC and industrial networks, and foundation of feedback control theory for engineers.

Prerequisites: MAB126 or MAB182 or MAB132
Assumed knowledge: ENB105 or ENB205 or ENB243 are assumed knowledge.
Credit points: 12
Contact hours: 5 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

ENB311 STRESS ANALYSIS
Further analysis of stress and strain; torsion of prismatic sections and thin-walled sections; axisymmetric problems; energy methods; thin plates. Introduction to FEA including the use of a FEA software.

Prerequisites: ENB102 or ENB212
Equivalents: MMB212
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

ENB312 DYNAMICS OF MACHINERY
Kinematic and dynamic analysis of planar linkages and mechanisms; multi-degree of freedom systems with steady and transient vibrations, Introduction to noise.

Prerequisites: ENB211
Credit points: 12
Contact hours: 4 per week
Campus: Gardens Point
Teaching period: 2010 SEM-2

ENB333 OPERATIONS MANAGEMENT
This unit develops students' ability in applying quantitative techniques in solving different types of industrial operations problems. Topics include: product mix, assignment and transportation models; location and layout decisions, job
design analysis; project planning; quality control and the use of simulation in operations management.

**Equivalents:** MMB476  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**ENB336 INDUSTRIAL ENGINEERING**

Aim of this unit is to develop skills and understanding of the concepts and techniques of lean manufacturing (methods engineering). These includes identifying wastes using Value Stream Mapping (VSM), 5S, SMED, JIT, plant layout, cell design with proper material handling and balance and job design with due consideration to ergonomics.

**Assumed knowledge:** MAB233 is assumed knowledge.  
**Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-2

**ENB342 SIGNALS, SYSTEMS AND TRANSFORMS**

The unit covers the area of Signals in Linear Systems for which a detailed study of Fourier theory applied to both analogue and discrete-time signals and to the analysis of linear systems will be given. Systems will be represented in time as well as in frequency and various characteristics and relationships in the two domains will be discussed. The students will be introduced to the fundamentals of analogue and discrete-time signal processing; analogue and discrete Fourier transform; linear and discrete convolution. Finally, the students will learn the fundamentals of digital filter design and implementation, with examples and applications arising from various disciplines.

**Prerequisites:** ENB242  **Assumed knowledge:** ENB243 and ENB246 are assumed knowledge.  
**Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**ENB350 REAL-TIME COMPUTER-BASED SYSTEMS**

This unit covers the area of embedded systems and real-time kernels. C programming is reviewed in the context of real-time applications where it is often mixed with assembly language. Data representations, input-output programming, concurrency, scheduling, memory management and system initialisation are discussed. Programming laboratory exercises introduce development tools and reinforce fundamental concepts such as polling, interrupt driven input-output, serial port communication, pre-emptive and non pre-emptive scheduling, resource sharing, priority inversion and deadlock. Students develop a simple real-time process control application using programmable logic and micro-controllers.

**Prerequisites:** ENB244  **Equivalents:** EEB566  
**Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

This unit addresses the following: computer networks; network programming; open network foundations; embedded systems; client/server; bus architectures; network controllers; distributed systems in automation and process control; embedded Java; distributed objects; distributed databases; distributed operating systems.

**ENB352 COMMUNICATION ENVIRONMENTS FOR EMBEDDED SYSTEMS**

This unit addresses the following: computer networks; network programming; open network foundations; embedded systems; client/server; bus architectures; network controllers; distributed systems in automation and process control; embedded Java; distributed objects; distributed databases; distributed operating systems.

**Prerequisites:** ENB350  **Equivalents:** EEB666  
**Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-2

**ENB432 ENGINEERING ASSET MANAGEMENT AND MAINTENANCE**

This unit includes the following: engineering asset management policy statement; overhaul and replacement of engineering assets; organisation for maintenance; maintenance planning and control; failure mode and effect analysis; reliability, maintainability and availability analysis; risk assessment; spare parts inventory management.

**Assumed knowledge:** MAB233 is assumed knowledge.  
**Equivalents:** MMB470  
**Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**HHB127 ENVIRONMENT AND SOCIETY**

This unit includes a geographical systems approach to investigations of the natural and social environments, and human-environmental interactions. The emphasis is on explaining spatial patterns and variability in social and natural landscapes through the understanding of physical, social and cultural processes and systems at regional and local spatial scales. Through practical sessions, the acquisition of basic geographical field and mapping skill is fostered.

**Credit points:** 12  **Campus:** Carseldine  **Teaching period:** 2009 SEM-1  **Incompatible with:** HUB201, HHB227

**IFP100 KNOWLEDGE TRANSFER AND RESEARCH COMMERCIALISATION**

This unit provides you with practical information and builds skills and capacities in the identification of commercialisation opportunities and the implementation of commercialisation processes appropriate to your research.  
**Credit points:** 12  **Campus:** Internet  **Teaching period:** 2010 SEM-1 and 2010 SEM-2

**INN221 TECHNOLOGY MANAGEMENT**

This unit presents operational, tactical and strategic insights that support the activities central to the leadership and management of technology. These insights include project management, organisational leadership, outsourcing, planning, governance and millennium technologies. Such insights are used to inform decision-making - the core skill of any manager. Technology managers must understand the factors influencing any decision point. This unit equips...
students for the challenges of management and to contribute to the decision-making faced by managers and the staff who advise on these issues.

**Antirequisites:** ITN241, ITN251, ITN366, INB221

**Assumed knowledge:** INB103, ITB002 or ITB360 is assumed knowledge

**Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Gardens Point    **Teaching period:** 2010 SEM-1

**INN311 ENTERPRISE SYSTEMS**
The unit presents and discusses the Enterprise Systems Lifecycle model, orienting students to the requirements of addressing total cost of ownership, change management requirements and process modelling requirements in order to achieve business benefits. Concepts of Enterprise Systems success and associated enablers and barriers are also introduced. This unit introduces the technical architecture of complex 3-tiered client server environments. It seeks to show how an integrated complex database environment meets common business needs, and yet fails to meet the total information Systems requirements.

**Antirequisites:** INB311    **Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Gardens Point    **Teaching period:** 2010 SEM-2

**KIP401 VISUAL COMMUNICATION**
Communication Design deals with visual communication and the creation of meaning through images. This unit will introduce you to the principles, production and presentation of visual design and communication.

**Antirequisites:** KIB101, KIB801    **Credit points:** 12    **Contact hours:** 4 per week    **Campus:** Kelvin Grove    **Teaching period:** 2010 SEM-1 and 2010 SEM-2

**MGN423 CONTEMPORARY STRATEGIC ANALYSIS**
This unit focuses upon developing managers’ understanding of the strategy concept and placing the fundamental elements of strategy in a framework for use in the decision making process. Taking the perspective that many managers make decisions that can have strategic implications, the emphasis is upon studying those issues that can affect the strategic positioning of the organisation. This involves creating an understanding of the universal building blocks of competitive advantage at the business, corporate and international levels. By understanding the nature and determinants of competitive and comparative advantages, students will be well positioned to take a more strategic perspective in their organisational activities.

**Antirequisites:** BSN407 and MGN504    **Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Gardens Point    **Teaching period:** 2010 SEM-2

**MGN447 MANAGING IN A GLOBALISED ECONOMY**
This core unit examines the forces of globalisation, the diversity of international environments and their impact on business functions at the operational level. It examines the processes and challenges of internationalising the business operation as firms strive to compete successfully in the global marketplaces. Areas of study include the growth of international business and globalisation, international business motives and forms, the nature and challenges of the diversity of environments, and managing and controlling business operations. An international business simulation game is used to facilitate the understanding of business as a system of integrated operations and environments.

**Antirequisites:** BSN408    **Equivalents:** IBN408    **Credit points:** 12    **Campus:** Gardens Point    **Teaching period:** 2010 SEM-2

**NRB600 SUSTAINABLE ENVIRONMENTAL MANAGEMENT**
Sustainable environmental management requires a multidisciplinary approach to decision-making. This approach must be founded on scientific knowledge about the environment, but to be effective, the science must also be integrated with social, economic, political and technological policies. This unit explores contemporary environmental management issues: the science behind them, linkages between them, their cultural settings and sustainable solutions.

**Prerequisite(s):** 48 credit points of second level units

**Credit points:** 12    **Contact hours:** 4 per week    **Campus:** Gardens Point    **Teaching period:** 2009 SEM-2

**Incompatible with:** HUB685

**PUN001 CONTEMPORARY RISK MANAGEMENT**
This unit provides an introduction to the risk management process as outlined in AS/NZS 4360 risk management. The unit concentrates on the context of risk management and introduces the student to the concepts that will be explored further in the units PUN008, PUN009 and EFN418. The structure of the organisation, its environment and the potential loss exposures are examined in some detail.

**Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Kelvin Grove and External    **Teaching period:** 2010 SEM-1

**PUN301 OCCUPATIONAL HEALTH AND SAFETY LAW AND MANAGEMENT**
This unit introduces students to the history of occupational health and safety and the impact on occupational health and safety practice of the law, and industrial relations. The theory and practice of occupational health and safety management is discussed.

**Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Kelvin Grove and External    **Teaching period:** 2010 SEM-1
PUN500 SAFETY MANAGEMENT
In this unit, students learn about the nature of materials with regards to material failure, fire and explosions. Students are introduced to the concept of the hierarchy of controls and learn about the various safety systems used to control physical, chemical and biological hazards. Students are also introduced to specific legislative requirements that regulate the use of such substances, the configuration of appropriate safety systems, and the storage, handling and transport of hazardous materials. Students develop skills in accident investigation.
Credit points: 12  Contact hours: 3  Campus: Kelvin Grove and External  Teaching period: 2010 SEM-2

PUP415 OCCUPATIONAL HEALTH
This unit explores chemical hazards in the working environment, epidemiological principles and practice, and identification of special risk groups in the workforce. Topics include the following: the pathological bases of disease in humans; chronic occupational diseases; occupational skin conditions; respiratory diseases; biological hazards in the work environment (bacteria, parasites, viruses, rickettsia and fungi); chemical and physical stresses and their physiological responses; physiological monitoring principles and practice; special risk groups; and epidemiological principles and practice.
Credit points: 12  Contact hours: 3  Campus: Kelvin Grove and External  Teaching period: 2010 SEM-2

UBD104 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.
Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

UBD213 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: 5 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

UBD312 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: 2010 SEM-1

UBD313 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: 2010 SEM-1

UBD316 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: 2010 SEM-2
UDB410 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. Equivalents: UDB368 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN551 HISTORY OF THE 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. Equivalents: UDB182 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN552 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. Equivalents: UDB164 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN553 SITE PLANNING

The objective of this unit is to assist students in learning and applying site planning theories and processes for a given site/areas within a city. The topics covered include: user stakeholder analysis, character analysis, site survey and site analysis, development of proposals. Equivalents: UDB265, PSP268 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN554 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. Equivalents: UDB266, DBP402 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-1

UDN555 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. Equivalents: UDB267 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN556 DEVELOPMENT PROCESS

This unit will address the development process within the framework of a multi-disciplinary activity focusing on a practical exercise for the preparation and lodgement of a development application. This framework will expose students to the manner within which sustainable land development should occur. The unit relies on and brings together, within the practical exercise, the knowledge and skills-set exposed to students in earlier units dealing with stewardship of land, sustainability and economics. The focus on the practical exercise will demonstrate in context the multi-disciplinary range of social, economic and ecological issues that practicing land development professionals need to understand and apply to demonstrate the comparative benefits and likely success of a development proposal. Equivalents: UDB302 Credit points: 12 Contact hours: 4 per week Campus: Gardens Point Teaching period: 2010 SEM-2

UDN557 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. Equivalents: UDB368 Credit points: 12 Contact
hours: 3 per week   Campus: Gardens Point   Teaching period: 2010 SEM-1

UDN558 REGIONAL AND METROPOLITAN POLICY
Students learn to focus and apply material from a wide range of disciplines and locations to understand and develop current regional and metropolitan policy. Issues of global, national and state regionalism, demography, economics, human services, central place theory, regional resource evaluation and public administration are related to work in the Regional Planning Practice unit.

Equivalents: UDB475, DBP414   Credit points: 12
Contact hours: 3 per week   Campus: Gardens Point
Teaching period: 2010 SEM-2