Bachelor of Information Technology (IT22)

Year offered: 2010
Admissions: No
CRICOS code: 012656E
Course duration (full-time): 3 years
Course duration (part-time): 6 years
Domestic fees (indicative): 2010: CSP $3,780 (indicative) per semester
International fees (indicative): 2010: $11,000 (indicative) per semester
QTAC code: 416801
Past rank cut-off: 74
Past OP cut-off: 13
Assumed knowledge: English (4, SA) and Maths A, B or C (4, SA)
Preparatory studies: For information on acquiring assumed knowledge visit http://www.studentservices.qut.edu.au/apply/ug/info/knowledge.jsp
Total credit points: 288
Course coordinator: Richard Thomas
Campus: Gardens Point

Course Information
From semester one, 2009 this course will not be available for commencing students. IT22 will only be available for continuing students. New students - please refer to IT23.

Course Overview
A Bachelor of Information Technology will start you on a challenging and rewarding career path facing the changes brought about by evolving global innovations. You will have the flexibility in your course to complement your skills and knowledge with a cross-section of study areas from other disciplines and faculties.

This course offers you a wide range of options to build your information technology skill set and develop complementary skills from other professional disciplines. You will gain a strong theoretical and practical foundation to advance your career aspirations, choosing from compact and focused specialisations allowing you to hone your skills in an advanced area of information technology and other professions.

Course Requirements
Block A: IT Core Studies
All students undertake ten core units over the duration of their course.

Block B: IT Major
Students who started their IT22 degree in 2008 must choose an IT Major consisting of six designated units from one of the following 4 Majors:
• Information Systems (ISY)
• Network Systems (NET)
• Software Architecture (SOA)
• Generic – No Major (XYZ)

Students who started their IT22 degree before 2008 must choose an IT Major consisting of six designated units from one of the following 13 Majors:
• Business Systems Engineering (BSE)
• Databases (DTB)
• Electronic Business (EBI)
• Games Technology (GAM)
• Information and Knowledge Management (ITK)
• Information Systems (ISY)
• Information Technology Management (IMG)
• Intelligent Systems (ITS)
• Interactive Media (IAM)
• Network Systems (NET)
• Security (SEC)
• Software Architecture (SOA)
• Web Services and Applications (WSA)

Block C: Complementary Studies
Students choose the composition of the third block of the course. The choice may include one from the following suggestions:
• A six unit set (which may be chosen from the IT Majors) and two electives, or
• An approved unit set (four units) available from the list of University Wide Unit Sets http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectFacultyFromMain?faculty=IT and four electives, or
• Eight specified electives as approved by the Course Coordinator

Note: A maximum of 4 units of professional certification permissible towards complementary studies. This includes CISCO, Microsoft, etc.

Scholarships
If you wish to enrol in the Bachelor of Information Technology, you may like to consider our Dean's Scholars Program for OP1-2 students. If you are a female high school student, you may also apply for our ‘go for IT gURL’ merit scholarships.

Find out more about the range of scholarships available.
Cooperative Education Program
The School of IT's Cooperative Education Program gives you the opportunity of 10-12 months paid industry placement during your course where you can integrate real experience with what you’re learning in your degree. Companies that QUT's Coop Ed students have worked with include Energex, Boeing, CITEC, CSC Mining, Environmental Protection Agency, Dialog, UNiTAB, RACQ and many Queensland Government departments. The Coop Ed Program is available to Australian citizens and permanent residents only.

Find out more about the Cooperative Education Program.

Professional Recognition
Graduates of the Bachelor of Information Technology meet the knowledge requirement for admission to the Australian Computer Society (ACS) as members.

Credit for Previous Study
Domestic and international applicants may claim credit for part of the degree, on the basis of completed or partially completed studies, related to the Bachelor of IT.

International students can access advanced standing arrangements on QUT's international site.

Domestic applicants should view the credit information on the Student Services site.

Deferment
QUT allows current Year 12 school leavers to defer their undergraduate admission offer for one year, or for six months if offered mid-year admission, except in courses using specific admission requirements such as questionnaires, folios, auditions, prior study or work experience.

Non-year 12 students may also request to defer their QTAC offer on the basis of demonstrated special circumstances. Find out more on deferment.

Unit Incompatibility/Translation Information
Details on the translation and incompatibility of old and new units is located here:
Undergraduate Translation Table
If you have completed the unit(s) listed under the "Translation Unit Codes" column you are not permitted to enrol in the listed new code.

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

Course Co-Ordinator
Mr Richard Thomas
Phone: +61 7 3138 2782
Email: enquiry.scitech@qut.edu.au

Bachelor of Information Technology

Course Structure
From semester one, 2009 this course will not be available for commencing students. IT22 will only be available for continuing students. New students - please refer to IT23. Please contact enquiry.scitech@qut.edu.au for any enquiries.

The course structure consists of 10 IT Core Studies Units (Block A), 6 Major Units (Block B) if applicable, and 8 Complementary Studies Area Units (Block C). For those students who choose the Generic No Major option, students replace the major units with any 6 ITBxxx units provided they meet the prerequisites.

Eight (8) Block A units are completed in the first year, while the remaining two (2) Block A units are completed later in the course.

Block C Complementary Studies Area (8 units): Students choose the composition which may include: a second IT Major (6 units) or an approved minor (4 units) and 4 electives or 8 specified electives as approved by the Course Coordinator.

Recommended Core Unit Progression

Year 1, Semester 1
INB104 Building IT Systems
INB103 Industry Insights
INB210 Databases
INB250 Systems Architecture

Year 1, Semester 2
INB270 Programming
INB251 Networks
INB271 The Web

Choose one unit from: Intermediate Level Elective list. This choice will replace ITB008 from 2009 course summary.

Year 2, Semester 1
Block B or Block C Unit
Block B or Block C Unit
Block B or Block C Unit
Block B or Block C Unit
Year 2, Semester 2
INB301 The Business of IT
  Block B or Block C Unit
  Block B or Block C Unit
  Block B or Block C Unit

Year 3, Semester 1
INB302 Capstone Project
  Block B or Block C Unit
  Block B or Block C Unit
  Block B or Block C Unit

No Major Options

Students can choose any 6 INB--- units (subject to prerequisite eligibility) from the Information Technology Undergraduate Elective/Options List as found at the below URL.

Information Systems Major

Compulsory Units
INB311 Enterprise Systems
INB340 Database Design
INB220 Business Analysis

IS Elective Units
INB312 Enterprise Systems Applications
INB342 Enterprise Data Mining
INB313 Electronic Commerce Site Development
INB322 Information Systems Consulting
INB320 Business Process Modelling
INB124 Information Systems Development
INB221 Technology Management

Network Systems Major

Compulsory Units
INB350 Internet Protocols and Services
INB351 Computer Network Administration
INB352 Network Planning and Deployment
INB255 Security

Electives
INB312 Enterprise Systems Applications
INB365 Systems Programming
INB353 Wireless and Mobile Networks
INB355 Cryptology and Protocols

Software Architecture Major

Compulsory Units
INB340 Database Design
INB371 Data Structures and Algorithms
INB372 Agile Software Development

Electives
INB341 Software Development With Oracle
INB311 Enterprise Systems
INB312 Enterprise Systems Applications
INB272 Interaction Design
INB313 Electronic Commerce Site Development
INB322 Information Systems Consulting
INB320 Business Process Modelling
INB365 Systems Programming
INB370 Software Development
INB373 Web Application Development
INB374 Enterprise Software Architecture
INB381 Modelling and Animation Techniques
INB382 Real Time Rendering Techniques

Intermediate Level Electives
INB120 Corporate Systems
INB220 Business Analysis
INB255 Security
INB272 Interaction Design
OR
an INB300 level unit as approved by the course coordinator

**IT Elective List**

<table>
<thead>
<tr>
<th>IT Elective Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB123  Project Management Practice</td>
</tr>
<tr>
<td>INB221  Technology Management</td>
</tr>
<tr>
<td>INB311  Enterprise Systems</td>
</tr>
<tr>
<td>INB312  Enterprise Systems Applications</td>
</tr>
<tr>
<td>INB313  Electronic Commerce Site Development</td>
</tr>
<tr>
<td>INB373  Web Application Development</td>
</tr>
<tr>
<td>INB374  Enterprise Software Architecture</td>
</tr>
<tr>
<td>INB385  Multimedia Systems</td>
</tr>
<tr>
<td>INB386  Advanced Multimedia Systems</td>
</tr>
<tr>
<td>INB320  Business Process Modelling</td>
</tr>
<tr>
<td>INB321  Business Process Management</td>
</tr>
<tr>
<td>INB322  Information Systems Consulting</td>
</tr>
<tr>
<td>INB323  Smart Services</td>
</tr>
<tr>
<td>INB330  Information Management</td>
</tr>
<tr>
<td>INB331  Management Issues for Information Professionals</td>
</tr>
<tr>
<td>INB333  Information Programs</td>
</tr>
<tr>
<td>INB334  Information Issues and Values</td>
</tr>
<tr>
<td>INB335  Information Resources</td>
</tr>
<tr>
<td>INB340  Database Design</td>
</tr>
<tr>
<td>INB341  Software Development With Oracle</td>
</tr>
<tr>
<td>INB342  Enterprise Data Mining</td>
</tr>
<tr>
<td>INB350  CCNA 1&amp;2 Network Fundamentals and Routing</td>
</tr>
<tr>
<td>INB351  CCNA 3&amp;4 Lan Switching</td>
</tr>
<tr>
<td>INB353  CCNP 2: Building Multi Layered Switched Networks</td>
</tr>
<tr>
<td>INB354  CCNP3: Building Multi Layered Switched Networks</td>
</tr>
<tr>
<td>INB355  Cryptology and Protocols</td>
</tr>
<tr>
<td>INB356  Systems Programming</td>
</tr>
<tr>
<td>INB357  Computational Intelligence for Control and Embedded Systems</td>
</tr>
<tr>
<td>INB345  Mobile Devices</td>
</tr>
<tr>
<td>INB346  Enterprise 2.0</td>
</tr>
<tr>
<td>INB347  Web 2.0 Applications</td>
</tr>
<tr>
<td>INB334  Information Issues and Values</td>
</tr>
</tbody>
</table>

**Business Systems Engineering Major (pre 2008)**

**Compulsory Units**

- INB220  Business Analysis
- INB311  Enterprise Systems
- INB320  Business Process Modelling
- INB335  Information Resources

**IS Elective Units**

Select two (2) units from the following list

- INB123  Project Management Practice
- INB306  Project 1
- INB312  Enterprise Systems Applications
- INB323  Smart Services
- INB340  Database Design
- INB341  Software Development With Oracle
- INB321  Business Process Management
- INB322  Information Systems Consulting

**Databases Major (pre 2008)**

**Core units**

- INB340  Database Design
- INB341  Software Development With Oracle
- INB342  Enterprise Data Mining
Elective units
Choose 3 Elective units from the following list:

INB306  Project 1
INB311  Enterprise Systems
INB312  Enterprise Systems Applications
INB313  Electronic Commerce Site Development
INB320  Business Process Modelling
INB330  Information Management
INB335  Information Resources
INB343  Advanced Data Mining and Data Warehousing

Electronic Business Major (pre 2008)

Compulsory Units
INB312  Enterprise Systems Applications
INB313  Electronic Commerce Site Development
INB342  Enterprise Data Mining
BSB212  Electronic Business Applications
BSB213  Governance Issues in E-Business
BSB314  E-Business Intelligence

Games Technology Major (pre 2008)

Compulsory Units
INB370  Software Development
INB371  Data Structures and Algorithms
INB381  Modelling and Animation Techniques
INB382  Real Time Rendering Techniques
INB383  AI for Games
MAB281  Mathematics for Computer Graphics

Information Systems Major (pre 2008)

Compulsory Units
INB311  Enterprise Systems
INB312  Enterprise Systems Applications
INB340  Database Design

IS Elective Units
Select three (3) units from the following list:

INB306  Project 1
INB312  Enterprise Systems Applications
INB322  Information Systems Consulting
INB335  Information Resources
INB341  Software Development With Oracle

Information Technology Management Major (pre 2008)

Compulsory Units
INB221  Technology Management
INB322  Information Systems Consulting
INB335  Information Resources

IS Elective Units
Select three (3) units from the following list:

INB123  Project Management Practice
INB124  Information Systems Development
INB220  Business Analysis
INB341  Software Development With Oracle
INB306  Project 1
INB311  Enterprise Systems
INB340  Database Design

Intelligent Systems Major (pre 2008)

Compulsory Units
INB335  Information Resources
INB342  Enterprise Data Mining
INB371  Data Structures and Algorithms
INB860  Computational Intelligence for Control and Embedded Systems
IT Elective (INB383 and INB343 recommended)
IT Elective
6 Units required

Interactive Media Major (pre 2008)

Compulsory Units
6 Compulsory units required.
INB272  Interaction Design
INB385  Multimedia Systems
INB386  Advanced Multimedia Systems
KIB101  Foundations of Communication Design 1
KIB102  Foundations of Communication Design 2

Elective Units
Select one (1) unit from the following list:

KIB103  Media Technology 1
KIB105  Animation and Motion Graphics
KIB108  Animation Practices
KIB units

Only students enrolled in the IAM major may enrol in KIB*** units without the approval of the Creative Industries Faculty. These units are held at Kelvin Grove campus - class code to be KG

Network Systems Major (pre 2008)

Compulsory Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB350</td>
<td>Internet Protocols and Services</td>
</tr>
<tr>
<td>INB351</td>
<td>Computer Network Administration</td>
</tr>
<tr>
<td>INB352</td>
<td>Network Planning and Deployment</td>
</tr>
<tr>
<td>INB353</td>
<td>Wireless and Mobile Networks</td>
</tr>
<tr>
<td>INB365</td>
<td>Systems Programming</td>
</tr>
</tbody>
</table>

Elective Units (1)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IT Elective</td>
</tr>
</tbody>
</table>

Security Major (pre 2008)

Compulsory Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB350</td>
<td>Internet Protocols and Services</td>
</tr>
<tr>
<td>INB351</td>
<td>Computer Network Administration</td>
</tr>
<tr>
<td>INB255</td>
<td>Security</td>
</tr>
<tr>
<td>INB355</td>
<td>Cryptology and Protocols</td>
</tr>
</tbody>
</table>

Elective Units (1)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB272</td>
<td>Interaction Design</td>
</tr>
<tr>
<td>INB340</td>
<td>Database Design</td>
</tr>
<tr>
<td>INB370</td>
<td>Software Development</td>
</tr>
<tr>
<td>INB371</td>
<td>Data Structures and Algorithms</td>
</tr>
<tr>
<td>INB372</td>
<td>Agile Software Development</td>
</tr>
<tr>
<td>INB374</td>
<td>Enterprise Software Architecture</td>
</tr>
</tbody>
</table>

Web Services and Applications Major (pre 2008)

Compulsory Units

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>INB272</td>
<td>Interaction Design</td>
</tr>
<tr>
<td>INB313</td>
<td>Electronic Commerce Site Development</td>
</tr>
<tr>
<td>INB373</td>
<td>Web Application Development</td>
</tr>
</tbody>
</table>

Potential Careers:


UNIT SYNOPSES

Published on: 16 May 2011
Page 6/20
BSB212 ELECTRONIC BUSINESS APPLICATIONS
This unit looks at the ways in which organisations adopt and use various electronic business applications in areas of e-commerce, business-to-consumer, business-to-business and intra-business relations. Business models and their impact in various industries are analysed, enabling students to assess the underlying business case, and determine the model's viability in a competitive environment. The issues associated with front-end and back-end e-business applications are considered.
Prerequisite(s): BSB112 or CTB112 or BSB119 or CTB119 or equivalent
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2008 SEM-1
Incompatible with: AYB333, CTB212

BSB213 GOVERNANCE ISSUES IN E-BUSINESS
This unit introduces students to a wide range of information technology governance issues which confront business professionals during the implementation and operation of e-business strategies. It aims to provide e-business and IT professionals with an understanding of current IT governance frameworks and to ensure they are familiar with risk management, fraud detection and prevention, audit and legal issues that are relevant to an organisation's e-business operations.
Prerequisite(s): Business students: BSB111 or CTB111 and BSB119 or CTB119. Other students: 96 credit points of approved study
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2008 SEM-2
Incompatible with: AYB332, CTB213

BSB314 E-BUSINESS INTELLIGENCE
This unit looks at corporate strategic decisions and the information technology decision support systems and e-business intelligence needed to support management in this process. Group and enterprise IT decisions, data warehousing and corporate portals will be examined together with e-business intelligence applications. SAS software for decision support and data mining and visualisation will be covered. An introduction to advanced intelligent systems, artificial intelligence and knowledge based support systems will also form part of the unit.
Prerequisite(s): 96 credit points of prescribed study in a degree program
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2008 SEM-1

INB104 BUILDING IT SYSTEMS
This team-based unit is an integrated introduction to information technology designed to engage, inspire and inform and will demonstrate the important role that technical system design and development plays in achieving robust operation of a large variety of technological solutions. This unit will give you substantial hands-on, practical learning experiences and will motivate you through engagement in the creative, explorative and meaningful development of technological artefacts that operate in real world contexts.
Prerequisite(s): ITB001
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1 and 2010 SEM-2

INB120 CORPORATE SYSTEMS
Corporate Systems Management is a growing area where people can make a difference to the way organisations and societies operate. In key business domains, such as Government, Health, Finance, Utilities and Primary Industries, Corporate Systems Managers play a vital role in directing the socio-technical systems that affect everyone's lives. This unit will help students to gain an overview of these major roles and key business domains in order to set the scene for their future studies and help them to match their emerging professional interests with potential career directions.
Prerequisite(s): ITB002
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

INB123 PROJECT MANAGEMENT PRACTICE
Successful businesses use Project Management (PM) processes to structure the implementation, upgrades and process improvement activities undertaken within organisations. This unit investigates project management processes and analyses, combines and applies the basic elements and tools of successful projects to ICT cases. With a focus on contemporary organisations, the unit covers activities such as communication and risk management, change management, recording keeping and project reporting. The unit covers practical, relevant and topical PM issues delivered as a complex project activity.
Prerequisite(s): Nil
Corequisite(s): Nil
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2009 SEM-2
Incompatible with: NIL
INB123 PROJECT MANAGEMENT PRACTICE
Successful businesses use Project Management (PM) processes to structure the implementation, upgrades and process improvement activities undertaken within organisations. This unit investigates project management processes and analyses, combines and applies the basic elements and tools of successful projects to ICT cases. With a focus on contemporary organisations, the unit covers activities such as communication and risk management, change management, recording keeping and project reporting. The unit covers practical, relevant and topical PM issues delivered as a complex project activity.

Antirequisites: INN500 Assumed knowledge: Completion of 48 credit points of an Undergraduate study is assumed knowledge. Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

INB124 INFORMATION SYSTEMS DEVELOPMENT
IT professionals work with a wide variety of information systems and are increasingly required to interact with other professionals and understand business domains. In many cases it is necessary to develop custom systems to satisfy business requirements. Problem solving and communication skills and an understanding of programming concepts and logic are required to effectively work with information systems developers. In this dynamic industry, self-managed learning is necessary to remain abreast of technology innovations.

Prerequisite(s): Nil Corequisite(s): Nil Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2009 SEM-2 Incompatible with: Nil

INB124 INFORMATION SYSTEMS DEVELOPMENT
IT professionals work with a wide variety of information systems and are increasingly required to interact with other professionals and understand business domains. In many cases it is necessary to develop custom systems to satisfy business requirements. Problem solving and communication skills and an understanding of programming concepts and logic are required to effectively work with information systems developers. In this dynamic industry, self-managed learning is necessary to remain abreast of technology innovations.

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

INB204 SPECIAL TOPIC 1
This unit gives you the opportunity to apply, under appropriate guidance, the knowledge and skills gained in your course to date and to execute a substantial development project. The ability to apply technical knowledge and skills to real-life situations is essential for information technology professionals. A substantial project, under academic supervision, will develop your initiative and ability to apply your knowledge and skills in a professional capacity. Completing the project will also enable you to appreciate the complementary nature of the course material in total, particularly the need for careful project management.

Prerequisites: INB371 Assumed knowledge: Knowledge of programming in Java, C# or C++. Knowledge of basic data structures (stacks, queues, trees, linked lists, hash tables), complexity analysis Credit points: 12 Contact hours: 3 per week Campus: Gardens Point

INB205 SPECIAL TOPIC 2
This unit gives you the opportunity to apply, under appropriate guidance, the knowledge and skills gained in your course to date and to execute a substantial development project. The ability to apply technical knowledge and skills to real-life situations is essential for information technology professionals. A substantial project, under academic supervision, will develop your initiative and ability to apply your knowledge and skills in a professional capacity. Completing the project will also enable you to appreciate the complementary nature of the course material in total, particularly the need for careful project management.

Prerequisites: INB255, INB351 and INB365 Assumed knowledge: Basic computer security knowledge, a good understanding of the use of Unix operating systems, computer networking and Programming experience (such as Python, C#, C, Java). Other requisites: Students must have completed 192 credit points towards their bachelor degree. Students must have a GPA of 5.5 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point

INB210 DATABASES
The aim of this unit is to help you develop your knowledge, understand a formal specification tool (ORM) for modelling information systems unambiguously and to apply this formal technique to conceptualise information systems found in many real world application domains.

Assumed knowledge: Students are expected to have solid IT background knowledge (e.g., completion of at least 192 credit points) Equivalents: ITB004, ITB115 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-2

INB220 BUSINESS ANALYSIS
This unit is aims to give you an introduction to the role, knowledge, and skills required of a business analyst. This
unit focuses on both the trades—tools and methods used by a business analyst, as well as the soft skills—creativity and communication, both of which are critical to successful business and requirements analysis. Through lectures, cases studies and role playing activities, you will develop basic knowledge and skills required for introductory business analysis (BA).

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

**INB221 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.

**Prerequisites:** INB103 or ITB002 or INB120 or ITB360  
**Antirequisites:** ITN241, ITN251 and ITN366  
**Equivalents:** ITB366, ITB241  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB250 SYSTEMS ARCHITECTURE**

Contemporary computer-based systems are built from a wide range of technologies working at different levels of abstraction, from microprocessor hardware, to operating system and application software, to entire communications networks. At each abstraction level different techniques are needed to understand emergent properties of the system. This unit introduces some of the foundational principles commonly used to reason about the behaviour of computer-dependent systems at different levels of abstraction. Such techniques are especially important in the context of safety-, security- or mission-critical systems.

**Assumed knowledge:** Basic familiarity with set theory (Venn diagrams and set operators), elementary algebra (polynomial and summation expressions, exponents and logarithms, etc) and simple probability concepts (permutations and combinations).  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB251 NETWORKS**

Computer systems and communications networks are essential to the activities of modern organisations. When you graduate from a course in Information Technology, employers expect you to have a sound understanding of the terminology and concepts of computer systems, communications networks, and network services. This unit provides you with an introductory study of communications network technologies and network applications. The unit serves as an entry point to further specialised studies in the field of computer network systems.

**Antirequisites:** ITB006  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB255 SECURITY**

This unit aims to give you an understanding of the major issues in information security. You will be able to identify critical information security concepts and determine the information security implications of interactions between entities. You will have knowledge of a range of techniques for protecting information, and understand the limitations of these techniques. You will be aware of international information security management standards.

**Antirequisites:** ITB161, ITB523, ITB623 and ITN161  
**Equivalents:** ITB730  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB270 PROGRAMMING**

This unit aims to give you a positive introduction to the skills required in solving computational problems and implementing solutions in a programming or scripting language. Although some theoretical aspects of computer programming are introduced briefly, the overall emphasis of the unit is programming practice. The unit emphasises generic programming concepts and related problem-solving strategies. The skills you learn in this unit will be applicable to a wide variety of commonly-used, industrially-significant programming and scripting languages.

**Prerequisites:** INB104 or ENB246  
**Antirequisites:** ITB003, ITB112, ITB411, INN270  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB271 THE WEB**

The aims of the unit are to give you a thorough understanding of what the web is, how it works and what it has to offer. Additionally, the unit aims to give you a general understanding and basic skills in developing dynamic web applications, including an appreciation of the variety of implementation technologies available. Through an understanding of how web technologies have evolved to date, you will appreciate the necessity for lifelong learning and become an insightful predictor of future developments in this area. You will learn to critically analyse technological developments.
alternatives in order to adapt to and innovate with technologies that presently do not exist. You will appreciate the business or organizational context within which web applications exist and be skilled in communicating within that environment. You will appreciate the social and ethical issues relating to web based systems including accessibility, globalization, privacy, and piracy.

Prerequisites: INB104  Antirequisites: INB373 and INN373 and ITB007 and ITB227 and ITN007 and ITN227
Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INB272 INTERACTION DESIGN
The aim of this unit is to provide you with an understanding of the theory, practices and challenges associated with the development of creative interactive design and human computer interaction.

Prerequisites: INB103 or INB181  Equivalents: ITB254
Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INB301 THE BUSINESS OF IT
As an IT professional you are more and more evaluated in terms of the business value that you produce. This unit will prepare you for professional practice by making you "business savvy," i.e. giving you the business knowledge and skills that will help you with your future career and job. In particular the unit will address three themes: (1) career planning and job applications, (2) entrepreneurship & innovation, and (3) business and IT strategy. You will be introduced to career development tools that enable you to self-manage your career and life. You will learn how to critically think about the requirements of a job and reflect upon your own experiences and learn how to communicate them. You will also learn about the entrepreneurial process of identifying a business opportunity and how to take advantage of that opportunity. In addition, you will gain an understanding of core strategic concepts and models, discuss typical strategy tools and then apply them to the 'Business of IT'.

Antirequisites: ITB009  Assumed knowledge: Completion of 120 credit points within BIT is assumed
Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1 and 2010 SEM-2

INB302 CAPSTONE PROJECT
Students are to work together in a team of 4-5 on a project that addresses one of the following three types of problems: real business problems, real market needs, real research problems. This unit extends students' development of the professional, technical and teamwork skills required by IT professionals in practice. Students will extend their knowledge and skills in the areas of IT project management through completing professional project documentation and managing the team project. Students will also gain a greater understanding and skill level in analysis and design, and their significance in delivering successful business or research outcome. The unit also focuses on furthering students' professional skills in report writing, oral communication, and visual communication.

Prerequisites: INB301  Assumed knowledge: Students are expected to have a solid IT background knowledge (e.g., completion of at least 192 credit points)
Equivalents: ITB010  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

INB304 SPECIAL TOPIC 3
Traditional Artificial Intelligence (AI) aims at satisfying the Turing test, that is, it aims at making computers indistinguishable from humans. Computer games AI aims at giving Non-Player Characters (NPC) behavioural artefacts that complement a game narrative. Computer game AI is a special area of study that deals with algorithmic approaches to entertainment affects in NPC. Students will develop in
This unit gives you the opportunity to apply, under appropriate guidance, the knowledge and skills gained in your course to date and to execute a substantial development project. The ability to apply technical knowledge and skills to real-life situations is essential for information technology professionals. A substantial project, under academic supervision, will develop your initiative and ability to apply your knowledge and skills in a professional capacity. Completing the project will also enable you to appreciate the complementary nature of the course material in total, particularly the need for careful project management.

Assumed knowledge: Assumed knowledge is completion of 192cp of which at least 144cp must be IT units. Equivalents: ITB791 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

INB308 PROJECT 3
This unit gives you the opportunity to apply, under appropriate guidance, the knowledge and skills gained in your course to date and to execute a substantial development project. The ability to apply technical knowledge and skills to real-life situations is essential for information technology professionals. A substantial project, under academic supervision, will develop your initiative and ability to apply your knowledge and skills in a professional capacity. Completing the project will also enable you to appreciate the complementary nature of the course material in total, particularly the need for careful project management.

Assumed knowledge: Assumed knowledge is completion of 192cp of which at least 144cp must be IT units. Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

INB311 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.

Prerequisite(s): Nil Corequisite(s): Nil Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2009 SEM-2 Incompatible with: Nil

INB311 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.

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

**INB312 ENTERPRISE SYSTEMS APPLICATIONS**

The aim of this unit is to introduce one of the more complex and comprehensive Enterprise Systems applications. This unit introduces the business perspective and application processes of modules (such as FI, CO, PP, MM and SD) and investigates the support provided by these systems and the integration between modules by following some of the major processes in a business. The unit enables you to experience both the business analyst view and the user's view of the system across a number of business processes.

**Antirequisites:** ITB233, INN312  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-2

**INB313 ELECTRONIC COMMERCE SITE DEVELOPMENT**

This unit will enable you to specify, design, implement and maintain effective e-commerce applications. You will obtain a broad understanding of the potential of e-commerce and how it can be employed to benefit an organisation. You will get direct experience of creating an e-commerce storefront following a business to business (B to B) or business to consumer (B to C) model. You will also have an understanding of the computer systems that underpin e-commerce including payment systems and secure transactions.

**Prerequisite(s):** INB271 or INB210  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2

**INB320 BUSINESS PROCESS MODELLING**

The aim of this unit is to introduce you to modern methods and tools of business process management. These skills will be applied to the most complex, comprehensive and relevant IT applications. This unit also seeks to develop logical thinking and the capability to understand and deal with complex systems, within a business management framework. The content will focus strongly on business process modelling, as a fundamental technique to manage the complexity associated with process management tasks within various contexts.

**Pre requisite(s):** Nil  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2

**INB321 BUSINESS PROCESS MANAGEMENT**

The aim of this unit is to introduce you to modern methodologies of Business Process Management. A main objective is to increase your awareness of the close link between business requirements and IT capabilities, and the related fundamental role of business processes. This unit also seeks to develop logical thinking, an appreciation for conceptual models, and the capability to understand and deal with complex systems.

**Antirequisites:** INN321  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**INB322 INFORMATION SYSTEMS CONSULTING**
The aim of the unit is to develop your skills in the consulting engagement process. This unit will give you an appreciation of the management of consulting practices and an understanding of the consulting sector generally. This unit presents the tactical and strategic issues involved in management consulting, and in particular: client engagement. In the unit there is an emphasis on Information Systems (IS) related work. IS constitutes a substantial portion of consulting activity and cuts across all areas of business expertise. The unit examines the dynamics of IS consulting within the context of large consulting firms and familiarises students with the consulting engagement lifecycle.

**Antirequisites:** ITB264, ITN264  **Assumed knowledge:** Completion of 96 credit points of an Undergraduate study is assumed knowledge  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**INB323 SMART SERVICES**

This unit gives you the opportunity to apply, under appropriate guidance, the knowledge and skills gained in your course to date and to execute a substantial development project. The ability to apply technical knowledge and skills to real-life situations is essential for information technology professionals. A substantial project, under academic supervision, will develop your initiative and ability to apply your knowledge and skills in a professional capacity. Completing the project will also enable you to appreciate the complementary nature of the course material in total, particularly the need for careful project management.

**Prerequisite(s):** Nil  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2  **Incompatible with:** Nil

**INB330 INFORMATION MANAGEMENT**

The aim of this unit is to provide you with an awareness of the activities in which IM professionals are engaged within various organisational contexts. You will use case studies and introduce yourself to the strategic and analytic elements that comprise information management activities. These activities include the alignment of enterprise information and business planning, enterprise information policy, evaluation of information resources & systems and applications of the information inventory.

**Prerequisite(s):** Nil  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2  **Incompatible with:** Nil

**INB331 MANAGEMENT ISSUES FOR INFORMATION PROFESSIONALS**

The overall aim is to enable you to identify and resolve selected key management issues within a particular type of organisation of your choice. Using an integrated approach the subject draws from the field of organisational behaviour, business management literature, IT-management, and other readings appropriate to your interest. A further emphasis will be on case studies of actual practices in the type of organisation or enterprise environment setting that you have chosen to investigate.

**Equivalents:** ITN274  **Credit points:** 12  **Contact hours:** IT04, IT06, IT07, IT09, IF29, IX53, IF48, IF58, IF59, IF90, IX09, IX25, IX55, IX56, IX57, IX58, IX49, IX63, IX65, IX69  **Campus:** Gardens Point

**INB333 INFORMATION PROGRAMS**

The unit encompasses the planning, implementation and evaluation of an information product or service for a particular community of use. The community may be anything from a specialised professional or business group, to community members with special needs etc. Emphasis is on identification of user needs, creating an information product or program and marketing or promoting its use. The unit also explores the impact of web 2.0 technologies (e.g. blogs, wikis, facebook, YouTube, flickr) and concepts such as creative commons and open access on program and product design and delivery are explored.

**Prerequisite(s):** Nil  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Incompatible with:** ITN330

**INB334 INFORMATION ISSUES AND VALUES**

The overall aim is to enable you to identify and critically discuss key issues (ie social, economic, political, cultural, legal, psychological) that impact upon the role and use of information and IT in different contexts of the information society (ie academic, professional, personal). You will critically consider the role of information and IT professionals in dealing ethically and legally with the many issues evolving within the emerging information society. The unit draws from the fields of psychology, business, library and information science, IT, education, sociology and law.

**Antirequisites:** ITN330  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

**INB335 INFORMATION RESOURCES**

This unit will help you to understand the structure of the information environment, to reflect upon the information resources you discover, and to develop the ability to find appropriate information for future problem solving. You will develop your skills in identifying, accessing, evaluating and retrieving information resources to meet specific information...
needs. The unit will also help you develop skills in teamwork and oral and written communication.

**Equivalents:** ITB322  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB340 DATABASE DESIGN**

The aim of this unit is to help you develop your knowledge, understand a formal specification tool (ORM) for modelling information systems unambiguously and to apply this formal technique to conceptualise information systems found in many real world application domains.

**Prerequisites:** INB210 or ITB004  
**Antirequisites:** ITB229  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB341 SOFTWARE DEVELOPMENT WITH ORACLE**

Oracle Corporation is the leading supplier of database software. This unit aims to develop a sound understanding of database creation, installation, administration, management, security, back up/recovery and application development. The unit aims to develop practical skills in each of these elements, using appropriate Oracle software.

It is expected that students undertaking this unit will have prior knowledge of relational database terminology and concepts, be thoroughly able to develop SQL for querying, updating and creating tables, and have a sound knowledge of database design.

**Prerequisites:** INB210 or ITB004 or INB122  
**Equivalents:** ITB223  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB342 ENTERPRISE DATA MINING**

This unit will provide a comprehensive theoretical coverage of various topics in data and web mining. In addition there will be a significant practical component using hands on tools to solve real-world problems. Specifically, we will consider techniques from machine learning, data mining, text mining, and information retrieval to extract useful knowledge from data which are used for business intelligence, document databases, site management, personalization, and user profiling. This unit will first cover a detailed overview of the mining process and techniques, and then concentrate on applications of these techniques to web, e-commerce, document databases and data from advanced applications.

**Prerequisites:** INB122 or INB210 or INB340 or AYB114  
**Antirequisites:** INN342  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB343 SOFTWARE DEVELOPMENT WITH ORACLE**

This unit aims to develop a sound understanding of database creation, installation, administration, management, security, back up/recovery and application development. The unit aims to develop practical skills in each of these elements, using appropriate Oracle software.

It is expected that students undertaking this unit will have prior knowledge of relational database terminology and concepts, be thoroughly able to develop SQL for querying, updating and creating tables, and have a sound knowledge of database design.

**Prerequisite(s):** INB210 and INB340 or equivalents  
**Corequisite(s):** Nil  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2009 SEM-2  
**Incompatible with:** Nil

**INB344 ADVANCED DATA MINING AND DATA WAREHOUSING**

Data warehousing and mining have been well recognized as the dominating techniques for using databases in the future. This unit discusses the concepts, structures and algorithms of data warehousing and mining, e.g., data architecture and quality, data warehouse and data mart, data cubes, OLAP, patterns, association rules and decision tables. Through this study, students will be able to demonstrate knowledge and skills of designing, developing and implementing data warehousing components in SQL environments. It also enables students to design systems and tools that provide services to data management and analysis, such as data
warehouses, data mining tools, business intelligence based systems, smart information use systems, and data processing systems.

**Prerequisites:** INB210  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point

### INB345 MOBILE DEVICES

This unit provides the opportunity for exploring new and emerging mobile devices and wireless technology including iPhone, Netbook, 3G, WiMax, and RFID. Students will critically review and understand how they can be used for current contexts such as government, business, education and social community, as well as emerging ‘wilderness’ environments with no power and wired communication. Students will appreciate the impacts of these devices and be inspired for the current and future opportunities in ICT usage trends.

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

### INB346 ENTERPRISE 2.0

This unit will help you to acquire the skills and knowledge required to critically explore and utilise applications within diverse contexts and organisations.

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

### INB347 WEB 2.0 APPLICATIONS

Web 2.0 applications enable the user to be control. The unit will provide the opportunity for students to explore web 2.0 applications including blogs, wikis, social networking, social tagging, podcasts, gaming, storytelling and virtual worlds such as second life. Students will critically consider the many and varied web applications and how they can be used in different contexts such as government, small and medium size businesses, non-profit organisations, educational institutions and community groups.

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

### INB350 INTERNET PROTOCOLS AND SERVICES

An understanding of the theoretical and practical concepts of network protocols and services is highly useful and relevant to network engineers and others working in the Information Processing industries. This unit introduces you to Internet protocols and the design, implementation and operation of network based applications. Theory and practical skills taught in this unit will be useful if you intend undertaking further networking units.

**Prerequisites:** INB251 or ITB006 or ITB510

**Antirequisites:** ITB264, ITB629, ITB720, ITN525, ITN667, ITN720  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1

### INB351 COMPUTER NETWORK ADMINISTRATION

The aim of this unit is to provide students with a working knowledge of the technical aspects and theory of network administration and management. The unit uses the Unix environment as the learning platform for attaining technical skills and for the development of problem solving skills necessary to be a successful networking professional.

**Prerequisite(s):** INB251 or ITB006  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2  **Incompatible with:** INN351, ITB525, ITB535, ITB625, ITN525, ITN665, ITB721, ITN721 or equivalent

### INB352 NETWORK PLANNING AND DEPLOYMENT

The unit draws together subject matter from a number of different networking-related areas. The aim of the unit is to assemble the previously acquired knowledge and techniques and apply it in a cohesive fashion to the task of network planning.

**Prerequisites:** INB350  **Equivalents:** ITB721, ITB625, ITB535, ITB525  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-2

### INB351 COMPUTER NETWORK ADMINISTRATION

The aim of this unit is to provide students with a working knowledge of the technical aspects and theory of network administration and management. The unit uses the Unix environment as the learning platform for attaining technical skills and for the development of problem solving skills necessary to be a successful networking professional.

**Prerequisite(s):** INB251 or ITB006  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2  **Incompatible with:** INN351, ITB525, ITB535, ITB625, ITN525, ITN665, ITB721, ITN721 or equivalent

### INB352 NETWORK PLANNING AND DEPLOYMENT

The unit draws together subject matter from a number of different networking-related areas. The aim of the unit is to assemble the previously acquired knowledge and techniques and apply it in a cohesive fashion to the task of network planning.

**Prerequisite(s):** INB350  **Corequisite(s):** Nil  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2009 SEM-2  **Incompatible with:** ITB722, ITB628, ITB551
INB353 WIRELESS AND MOBILE NETWORKS
This unit provides you with the skills to be able to design and understand the issues involved with different types of wireless communications systems. It develops your knowledge of Wide Area Networks (WANs), Local Area Networks (LANs) and Personal Area Networks (PANs) as well as skills in programming for mobile handsets. You will also develop knowledge of the different types of wireless communications technologies available and when each is most applicable in a particular situation.

Prerequisite(s): INB270 or ITB006 Antirequisite(s): ITN723
Assumed knowledge: Networks or equivalent networking knowledge is assumed knowledge
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

INB355 CRYPTOLOGY AND PROTOCOLS
Cryptographic techniques are widely used to implement computer and network security. As an IT security professional you may be required either to evaluate or implement information systems using cryptographic algorithms and protocols. This elective unit covers the main cryptographic technical concepts including encryption, digital signatures and cryptographic protocols.

Antirequisite(s): ITB646, ITB548, ITB566
Assumed knowledge: Maths B or equivalent is assumed knowledge
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-1

INB365 SYSTEMS PROGRAMMING
Systems programming is an essential part of any computer-science education. This unit uses operating system concepts to teach the foundations of systems programming and advanced concepts for producing softwares that provide services to computer hardware. Through this study, you will be able to demonstrate knowledge of the principles and techniques of process management, memory and file management, protection & security, and distributed systems.

Prerequisite(s): INB270 Antirequisite(s): INN365, ITB745, ITB706
Assumed knowledge: Fundamentals of computer architecture; high level programming languages (such as C, C++, Java Python) is assumed knowledge.
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2010 SEM-2

INB365 SYSTEMS PROGRAMMING
Systems programming is an essential part of any computer-science education. This unit uses operating system concepts to teach the foundations of systems programming and advanced concepts for producing softwares that provide services to computer hardware. Through this study, you will be able to demonstrate knowledge of the principles and techniques of process management, memory and file management, protection & security, and distributed systems.

Prerequisite(s): INB370 or INB371
Credit points: 12
Published on: 16 May 2011
Page 16/20
INB372 AGILE SOFTWARE DEVELOPMENT
This unit introduces you to the software development process. You will look at each of the major activities involved in developing a software system. You will also learn how to manage and control the software development process for a large project when a number of team members are involved in the development. This unit develops the professional practice of working on large software systems.

Prerequisites: INB370  Antirequisites: INN372, ITB612, ITB712  Assumed knowledge: Good programming, debugging, testing and software development skills.
Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INB373 WEB APPLICATION DEVELOPMENT
This unit will provide you with an understanding of the issues, structure and technologies used for developing web-based systems. The unit will provide you with the theoretical and practical skills needed to develop enterprise critical applications designed with an n-tier architecture using state of the art technologies. A comparative technology approach is taken, including an analysis of how web technologies have evolved to date, in order to identify common themes and to better enable you to comprehend and critically evaluate future web technology offerings.

Prerequisites: INB271 or ITB007  Antirequisites: INN373  Equivalents: ITB716 and ITN716  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INB374 ENTERPRISE SOFTWARE ARCHITECTURE
This unit aims to introduce you to the field of enterprise architecture. It attempts to give you a grounding in the basic knowledge and skills required by an enterprise architect. This includes a solid understanding of the IT challenges currently facing medium to large size organizations, the theory and technologies currently used to address them and an appreciation of the business imperative for which they are utilized.

Prerequisite(s): INB270 or ITB003  Corequisite(s): Nil  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2009 SEM-2

INB381 MODELLING AND ANIMATION TECHNIQUES
The unit will provide you with the knowledge and skills to use an industry standard graphics API to implement graphics applications and to develop a basic real time animation system using an industry standard language.

Prerequisites: INB371 and MAB281  Equivalents: ITB746  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1 and 2010 SEM-2

INB382 REAL TIME RENDERING TECHNIQUES
This unit will provide you with knowledge and skills in basic to advanced techniques in real-time rendering using shading languages. You will be able to implement a high-quality real-time rendering system in an industry standard API.

Prerequisite(s): INB371, INB381 and MAB281  Corequisite(s): Nil  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2009 SEM-2  Incompatible with: Nil

INB382 REAL TIME RENDERING TECHNIQUES
This unit will provide you with knowledge and skills in basic to advanced techniques in real-time rendering using shading languages. You will be able to implement a high-quality real-time rendering system in an industry standard API.

Prerequisites: INB371, INB381 and MAB281  Antirequisites: ITB648 and ITB649  Equivalents: ITB747  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INB383 AI FOR GAMES
The aim of this unit is to provide students with an intermediate to advanced level course in computer game AI, involving algorithmic and utility-based approaches to solving a wide range of problems in the interactive entertainment and game industries. You will gain both practical and theoretical knowledge about a range of AI techniques.
applied in computer games. You will be able to identify and explain different types of AI agents, describe their algorithms using a pseudo code convention, identify and explain different structures and algorithms used to represent and solve a range of problems in computer game AI.

**Prerequisites:** INB371 or MAB281  
**Antirequisites:** INB304 completed in semester 1 2009  
**Credit points:** 12  
**Contact hours:** 4 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB385 MULTIMEDIA SYSTEMS**

This unit will explore the concepts underpinning multimedia systems and the role played by these technologies in the overall knowledge of a computer professional. You will learn to: design and develop different kinds of interactive multimedia applications; understand the bank of knowledge in cultural developments surrounding the emergence of multimedia technologies; analyse design and processes that contribute to the production of a creative work, using contemporary hardware and software technologies; develop the creative potential of temporal media forms and their placement and use within new media works; understand principles and conventions associated with the interpretation and production of meaning through interactive visual representation.

**Prerequisites:** INB103 or ITB002  
**Antirequisites:** ITB257  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB386 ADVANCED MULTIMEDIA SYSTEMS**

This advanced level unit will give you high level design and development skills in some of the current and emerging areas of the new media. Web delivered applications, stand-alone systems and installations will be included. It will endeavour to give you an in-depth understanding of interactive Multimedia Systems. You will be given the theoretical basis and practical skills to motivate you in the design and creation of a state-of-the-art system in this discipline. In the process it will encourage a professional team approach appropriate to the industry environment.

**Prerequisites:** INB385 (Special considerations may apply)  
**Equivalents:** ITB259, ITN259  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INB386 ADVANCED MULTIMEDIA SYSTEMS**

This advanced level unit will give you high level design and development skills in some of the current and emerging areas of the new media. Web delivered applications, stand-alone systems and installations will be included. It will endeavour to give you an in-depth understanding of interactive Multimedia Systems. You will be given the theoretical basis and practical skills to motivate you in the design and creation of a state-of-the-art system in this discipline. In the process it will encourage a professional team approach appropriate to the industry environment.

**Prerequisite(s):** Nil  
**Corequisite(s):** Nil  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INB860 COMPUTATIONAL INTELLIGENCE FOR CONTROL AND EMBEDDED SYSTEMS**

This is a specialisation unit in the area of Infomechatronics that introduces five methods from the field of computational intelligence and relates them to applications on real time control and embedded systems. The methods are: Knowledge Base Systems, Fuzzy Control, Neural Networks, Reinforcement Learning and Evolutionary Computation. The unit is also intended to teach the specific design and programming skills that will enable you to solve problems using computational intelligence methods in real-time embedded systems. It is assumed that you already have knowledge of programming.

**Antirequisites:** ITB847  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INS350 CCNA 1&2 NETWORK FUNDAMENTALS AND ROUTING**

This unit provides in-demand Internet technology skills for designing, building and maintaining networks. Combining instructor-led, online education with hands-on laboratory exercises, the curriculum enables students to apply what they learn in class while working on actual networks. From building basic networking skills to advanced VLAN troubleshooting, the Networking Academy curriculum prepares students for industry certification that lead to lifelong opportunities. Particular emphasis is given to using decision-making and problem-solving techniques in the application of science, mathematics, communication and social studies concepts to solve networking problems.

**Antirequisites:** INS450  
**Equivalents:** ITS701, ITS601, ITB011, ITN011  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1 and 2010 SEM-2

**INS351 CCNA 3&4 LAN SWITCHING**

This unit is the second step to a Cisco career certification path. The aim of this unit is to prepare students for the topics covered in Interconnecting Cisco Networking Devices Part 2 (ICND2) v1.0 (640-816) and Cisco Certified Network Associate Exam (CCNA 640-802). The ICND exam is one of the two qualifying exams available to candidates pursuing a two-exam option for the Cisco Certified Network Associate
(CCNA) certification and CCNA 640-802, single-exam option for the Cisco Certified Network Associate CCNA certification.

Prerequisites: INS350  Antirequisites: ITB011,INS451
Equivalents: ITS602 and ITS702 and ITB012  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1 and 2010 SEM-2

**INS352 CCNP1: BUILDING SCALABLE INTERNETWORKS**
This unit is the second step to a Cisco career certification path. It provides more knowledge and practical skills on Wide Area Network through various routing protocols and layer 2 related technologies. This unit provides you with advanced level of study on WAN technologies.

Prerequisites: INS351  Antirequisites: INS452
Assumed knowledge: INS350, CCNA 1/2/3/4 are recommended prior study  Equivalents: ITS703  Credit points: 12  Campus: Gardens Point  Teaching period: 2010 SEM-1

**INS353 CCNP 2: BUILDING MULTI LAYERED SWITCHED NETWORKS**
This unit provides more knowledge and practical skills on building multi-layered switched networks. The aim of the unit is to provide professional knowledge and skills focusing on multi layered switched networks.

Prerequisites: INS352  Antirequisites: INS453
Equivalents: ITS704  Credit points: 12  Campus: Gardens Point  Teaching period: 2010 SEM-2

**INS354 CCNP3: BUILDING MULTI LAYERED SWITCHED NETWORKS**
This unit is the second step to a Cisco career certification path. It provides more knowledge and practical skills on securing enterprise networks with various security technologies. The aim of this unit is to provide professional knowledge and skills focusing on securing LANs and WANs environment.

Prerequisites: INS351  Antirequisites: INS454
Assumed knowledge: INS350 and INS351 are recommended prior study  Equivalents: ITS705  Credit points: 12  Campus: Gardens Point  Teaching period: 2010 SEM-1

**INS355 CCNP 4: OPTIMISING CONVERGED NETWORKS**
This unit provides more knowledge and practical skills on optimising converged networks. The aim of the unit is to provide professional knowledge and skills focusing on converged networks.

Prerequisites: INS354  Antirequisites: INS455  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

**KIB101 FOUNDATIONS OF COMMUNICATION DESIGN 1**
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.

Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2008 SEM-1  Incompatible with: KKB007, KKB818

**KIB102 FOUNDATIONS OF COMMUNICATION DESIGN 2**
This unit further develops interface design skills for communications technologies including design priorities, interaction, visual systems, refinement of concepts, project analysis and problem solving through presentation models.

Prerequisite(s): KIB101/KIB801  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2008 SEM-2  Incompatible with: KIB802

**KIB103 MEDIA TECHNOLOGY 1**
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.

Contact hours: 4 per week  Campus: Kelvin Grove  Teaching period: 2008 SEM-1  Incompatible with: KKB007, KKB818

**KIB105 ANIMATION AND MOTION GRAPHICS**
This unit provides an introduction to animation and motion graphics concepts and practices, with an emphasis on principles of design in motion

Credit points: 12  Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2008 SEM-2

**KIB108 ANIMATION PRACTICES**
The unit is an introductory examination of the development of animation. It addresses social, cultural, economic and technological themes that have shaped notable practitioners and established animation as a significant medium for the expression of popular culture, artistic experiment and philosophical, social and political comment.

Contact hours: 3 per week  Campus: Kelvin Grove  Teaching period: 2008 SEM-1  Incompatible with: KIB825

**MAB281 MATHEMATICS FOR COMPUTER GRAPHICS**
This unit introduces students to the mathematics involved in computer graphics, computer games and virtual reality. It is heavily reliant on analytic, Euclidean and projective geometries in 2D and 3D, elementary trigonometry, elementary linear algebra and elementary calculus. The unit will develop the mathematical concepts and where practicable show how these concepts are then applied in the field of computer graphics. Students must have completed four semesters of Senior Mathematics B with an exit level of Sound Achievement, or have passed MAB105 (or equivalent).

**Assumed knowledge:** Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge.

**Credit points:** 12

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2010 SEM-2

---

**MAB281 MATHEMATICS FOR COMPUTER GRAPHICS**

This unit introduces students to the mathematics involved in computer graphics, computer games and virtual reality. It is heavily reliant on analytic, Euclidean and projective geometries, elementary trigonometry and elementary calculus in both two and three dimensions. The unit will develop the mathematical concepts and where practicable show how these concepts are then applied in the field of computer graphics.

**Prerequisite(s):** ITB003 and Senior Mathematics B or MAB105

**Contact hours:** 4 per week

**Campus:** Gardens Point

**Teaching period:** 2008 SEM-2