Master of Information Technology (IT Graduates) (IT40)

Year offered: 2010
Admissions: No
CRICOS code: 003776E
Course duration (full-time): 3 semesters
Course duration (part-time): 6 semesters
Domestic fees (indicative): 2010: Full fee tuition $7,250 (indicative) per semester
International Fees (indicative): 2010: $10,750 (indicative) per semester
Total credit points: 144
Course coordinator: Dr Ernest Foo
Campus: Gardens Point

Course Overview
The Master of Information Technology — with associated nested graduate diploma and graduate certificates — can be tailored for information technology graduates who wish to revise, update or extend their IT skills and knowledge. Students may take the Master of Information Technology as a broad-based qualification or choose to specialise in a particular area such as networks, security, enterprise systems, software development, IT management or games development.

With multiple specialisations now emerging in IT, applicants with existing IT qualifications may wish to study advanced units in their own specialisation, and/or move into an entirely different study of IT.

IT graduates who are unsure about enrolling in a full Masters program may like to enrol in a Graduate Certificate or Graduate Diploma which can then be used to articulate into the Master of Information Technology (IT40).

Course Update
From semester one, 2009 this course will not be available for commencing students. IT40 will only be available for continuing students. New students - please refer to IT43. Please contact enquiry.scitech@qut.edu.au for any enquiries.

Entry Requirements
A bachelor degree majoring in information technology with a grade point average of at least 4.5 (on a 7-point scale) OR evidence of work experience and/or training equivalent to an IT major.

Course Structure
Students who commenced Semester 2, 2006 or later

To graduate from the Master of Information Technology, students are required to complete 12 units, consisting of:

• 1 x Compulsory Unit – INN500 IT Project Management
• A minimum of 6 x Advanced Level 1 Units (including INN500)
• A minimum of 1 x Advanced Level 2 Units
• A maximum of 3 x Postgraduate level Elective Units selected from outside the Faculty, in consultation with the Course Coordinator

To exit the Masters course with a Graduate Diploma in Information Technology, students are required to complete 8 units, consisting of:

• 1 x Compulsory Unit – INN500 IT Project Management
• A minimum of 5 x Advanced Level 1 Units (including INN500)
• A minimum of 1 x Advanced Level 2 Units

Students who commenced Semester 1, 2004 and prior to Semester 2, 2006

To graduate from the Master of Information Technology, students are required to complete 12 units, consisting of:

• A minimum of 6 x Advanced Level 1 Units
• A minimum of 1 x Advanced Level 2 Units

To exit the Masters course with a Graduate Diploma in Information Technology, students are required to have completed 8 units, consisting of:

• A minimum of 5 x Advanced Level 1 Units
• A minimum of 1 x Advanced Level 2 Units

Unit Incompatibility/Translation Information
Details on the translation and incompatibility of old and new units is located here:
Postgraduate 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:
Dr Ernest Foo
Phone: +61 7 3138 2782
Email: enquiry.scitech@qut.edu.au
Course Structure 2009

From semester one, 2009 this course will not be available for commencing students. IT35 will only be available for continuing students. Please contact enquiry.scitech@qut.edu.au for any enquiries.

Compulsory Unit*

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>INN500</td>
<td>PRINCE2 (R) Project Management</td>
</tr>
</tbody>
</table>

Only for students who commenced Semester 2, 2006 or later

Advanced Level 1 Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>INN280</td>
<td>Fundamentals of Game Design</td>
</tr>
<tr>
<td>INN281</td>
<td>Advanced Game Design</td>
</tr>
<tr>
<td>INN312</td>
<td>Enterprise Systems Applications</td>
</tr>
<tr>
<td>INN342</td>
<td>Enterprise Data Mining and Data Analysis</td>
</tr>
<tr>
<td>INN272</td>
<td>Interaction Design</td>
</tr>
<tr>
<td>INN385</td>
<td>Multimedia Systems</td>
</tr>
<tr>
<td>INN313</td>
<td>Electronic Commerce Site Development</td>
</tr>
<tr>
<td>INN322</td>
<td>Information Systems Consulting</td>
</tr>
<tr>
<td>INN500</td>
<td>PRINCE2 (R) Project Management</td>
</tr>
<tr>
<td>INN321</td>
<td>Business Process Management</td>
</tr>
<tr>
<td>INN371</td>
<td>Data Structures and Algorithms</td>
</tr>
<tr>
<td>INN365</td>
<td>Systems Programming</td>
</tr>
<tr>
<td>INN370</td>
<td>Software Development</td>
</tr>
<tr>
<td>INS452</td>
<td>CCNP1: Building Scalable Internetworks</td>
</tr>
<tr>
<td>INN352</td>
<td>Network Planning</td>
</tr>
<tr>
<td>INN373</td>
<td>Web Application Development</td>
</tr>
<tr>
<td>INS454</td>
<td>CCNP3: Building Multi Layered Switched Networks</td>
</tr>
<tr>
<td>INN353</td>
<td>Wireless and Mobile Networks</td>
</tr>
<tr>
<td>INN374</td>
<td>Enterprise Software Architecture</td>
</tr>
<tr>
<td>INN381</td>
<td>Modelling and Animation Techniques</td>
</tr>
<tr>
<td>INS455</td>
<td>CCNP4: Optimising Converged Networks</td>
</tr>
<tr>
<td>INN181</td>
<td>Introduction to Games Production</td>
</tr>
<tr>
<td>INS456</td>
<td>Voice Over IP 1</td>
</tr>
<tr>
<td>INS453</td>
<td>CCNP 2: Building Multi Layered Switched Networks</td>
</tr>
<tr>
<td>INS457</td>
<td>Voice Over IP 2</td>
</tr>
</tbody>
</table>

Project - 12 and 24 credit points (See Project Units for codes)

Advanced Level 2 Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>INN700</td>
<td>Introduction To Research</td>
</tr>
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</table>

Advanced Level 2 Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>INN610</td>
<td>Case Studies in Enterprise Systems</td>
</tr>
<tr>
<td>INN386</td>
<td>Advanced Multimedia Systems</td>
</tr>
<tr>
<td>INN701</td>
<td>Advanced Research Topics</td>
</tr>
<tr>
<td>INN382</td>
<td>Real Time Rendering Techniques</td>
</tr>
<tr>
<td>INN652</td>
<td>Advanced Cryptology</td>
</tr>
<tr>
<td>INN570</td>
<td>Internationalisation of Software</td>
</tr>
<tr>
<td>INN650</td>
<td>Advanced Network Management</td>
</tr>
<tr>
<td>INN600</td>
<td>Advanced Readings 1</td>
</tr>
<tr>
<td>INN601</td>
<td>Advanced Readings 2</td>
</tr>
<tr>
<td>INN606</td>
<td>Advanced Research 2</td>
</tr>
<tr>
<td>INN602</td>
<td>Advanced Readings 3</td>
</tr>
<tr>
<td>INN605</td>
<td>Advanced Research 1</td>
</tr>
<tr>
<td>INN607</td>
<td>Advanced Research 3</td>
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</table>

Project Units

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>INN690</td>
<td>Minor Project 1</td>
</tr>
<tr>
<td>INN691</td>
<td>Minor Project 2</td>
</tr>
<tr>
<td>INN693</td>
<td>Project</td>
</tr>
<tr>
<td>INN695</td>
<td>Major Project</td>
</tr>
<tr>
<td>INN692</td>
<td>Minor Project 3</td>
</tr>
<tr>
<td>INN696-1</td>
<td>Major Project - Part One</td>
</tr>
<tr>
<td>INN696-2</td>
<td>Major Project - Part Two</td>
</tr>
<tr>
<td>INN694-1</td>
<td>Project 1 - Part One</td>
</tr>
<tr>
<td>INN694-2</td>
<td>Project 1 - Part Two</td>
</tr>
</tbody>
</table>

Intermediate Level Units

With the approval of the Course Coordinator, students seeking skills in a new IT specialisation can select up to two (2) units from the following list of units.

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
</tr>
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<tbody>
<tr>
<td>INN271</td>
<td>The Web</td>
</tr>
<tr>
<td>INS450</td>
<td>CCNA 1 and 2 Network Fundamentals and Routing</td>
</tr>
<tr>
<td>INS451</td>
<td>CCNA 3 and 4 Lan Switching</td>
</tr>
<tr>
<td>INN341</td>
<td>Software Development With Oracle</td>
</tr>
<tr>
<td>INN311</td>
<td>Enterprise Systems</td>
</tr>
<tr>
<td>INN340</td>
<td>Database Design</td>
</tr>
<tr>
<td>INN330</td>
<td>Information Management</td>
</tr>
<tr>
<td>INN335</td>
<td>Information Resources</td>
</tr>
<tr>
<td>INN372</td>
<td>Agile Software Development</td>
</tr>
<tr>
<td>INN350</td>
<td>Internet Protocols and Services</td>
</tr>
<tr>
<td>INN351</td>
<td>Unix Network Administration</td>
</tr>
<tr>
<td>INN255</td>
<td>Security</td>
</tr>
<tr>
<td>INN355</td>
<td>Cryptology and Protocols</td>
</tr>
</tbody>
</table>
### INN370 Software Development

**IT89 - Graduate Certificate in IT (Wireless Games Technology)**

Four (4) units to be selected from the following
- INN272 Interaction Design
- INN350 Internet Protocols and Services
- INN353 Wireless and Mobile Networks
- INN381 Modelling and Animation Techniques

**IT90 Graduate Certificate in IT (Computer Networks)**

4 Units to be completed
- INN350 Internet Protocols and Services
- INN351 Unix Network Administration
- INN353 Wireless and Mobile Networks
- INN650 Advanced Network Management

**IT92 Grad Cert in Information Technology (Information Security)**

Four (4) units to be completed
- INN690 Minor Project 1
- INN255 Security
- INN355 Cryptology and Protocols
- INN652 Advanced Cryptology

**IT93 - Graduate Certificate in IT (Enterprise Wide Software)**

Four (4) units to be completed
- INN311 Enterprise Systems
- INN312 Enterprise Systems Applications
- INN610 Case Studies in Enterprise Systems
- INN321 Business Process Management

**IT94 - Graduate Certificate in IT (Electronic Commerce)**

Four (4) units to be selected from the following
- INN271 The Web
- INN340 Database Design
- INN313 Electronic Commerce Site Development
- INN255 Security

**IT95 - Graduate Certificate in IT (Project)**

48 credit points to be completed either full time or part-time

- INN695 Major Project
- INN696-1 IT Elective
- INN696-2 IT Elective

**IT96 - Graduate Certificate in IT (Information Technology Management)**

Four (4) units to be completed
- INN221 Technology Management
- INN322 Information Systems Consulting
- INN330 Information Management
- INN500 PRINCE2 (R) Project Management

**IT98 - Graduate Certificate in IT (Multimedia)**

Four (4) units to be selected from the following
- INN271 The Web
- INN272 Interaction Design
- INN385 Multimedia Systems
- INN386 Advanced Multimedia Systems

**IT99 - Graduate Certificate in IT (Component Software and Web Services)**

Four (4) units to be completed
- INN372 Agile Software Development
- INN370 Software Development
- INN373 Web Application Development
- INN374 Enterprise Software Architecture

**Potential Careers:**

Business Analyst, Data Communications Specialist, Database Manager, Electronic Commerce Developer, Internet Professional, Multimedia Designer, Network Administrator, Network Manager, Programmer, Software Engineer, Systems Analyst, Systems Manager, Systems Programmer.

### UNIT SYNOPSES

**INN181 INTRODUCTION TO GAMES PRODUCTION**

This subject will provide you with knowledge and skills in games production. By gaining an overview of the production process, you will learn how the technology and the people involved integrate into a coherent and efficient manufacturing process. By the end of this subject you will have the knowledge to conceive, create, integrate and...
optimise tools and personnel into a complete games production system.

Antirequisites: INB181, ITB751, ITN751  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

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

INN255 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: INB255  Equivalents: ITB161, ITB523, ITB623, ITB730, ITN161, ITN511, ITN523, ITN623, ITN663, ITN730  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN271 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 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.

Antirequisites: INB271  Assumed knowledge: Basic programming knowledge is assumed.  Equivalents: ITB007, ITB227, ITN007, ITN277  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN272 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.

Antirequisites: INB272  Equivalents: ITN254  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN280 FUNDAMENTALS OF GAME DESIGN
Modern games production is a complex process involving various businesses and organisations, working with budgets in the tens of millions. One of the roles within a game production team is that of the game designer. It is crucial that a game designer understands how to create a game world, the rules that govern game play and other high level design tasks. This subject provides an introduction to game design, by starting with high level conceptual design tasks before moving to more concrete tasks.

Antirequisites: ITB016 and INB280  Equivalents: ITN016  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN281 ADVANCED GAME DESIGN
This unit will provide you with theoretical and practical knowledge of advanced games design concepts; that is, specific activities undertaken by game designers and their purpose. By the end of this unit you will have the knowledge to identify problems and suggest solutions for innovative game designs, as well as understand how to carry out the process of designing a game yourself. You will possess practical and theoretical knowledge of game design issues such as: how to design a game level, how to design a task for it, and how to design characters whose behaviour and dialogue provide clues and prompts to the player.

Prerequisites: INN280  Antirequisites: ITB017 and INB281  Equivalents: ITN017  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

INN312 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 S&D) 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: INB312, ITB233  Equivalents: ITN233  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN313 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.

Antirequisites: INB313 and ITB260  Equivalents: ITN260  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN321 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: INB321  Equivalents: ITN298  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN322 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: INN335, ITN332,INB322  Assumed knowledge: Good knowledge of professional oral and written communication practices and team work processes is assumed.  Equivalents: ITN273  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN330 INFORMATION MANAGEMENT
The aim of this unit is to provide you with an awareness of the activities in which IS 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.

Antirequisites: INB330  Equivalents: ITN266  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN335 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.
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

INN340 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.

Antirequisites: INB340  Assumed knowledge: INN210 or INT200 is assumed knowledge  Equivalents: ITN229  Credit points: 12  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN341 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.

Prerequisites: INN210 or INT200 or INN122 or ITB004  Antirequisites: INB341, ITB223  Equivalents: ITN223  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN342 ENTERPRISE DATA MINING AND DATA ANALYSIS
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: INN210 or INN340 or INN122  Antirequisites: ITB239, INB342  Equivalents: ITN239  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN350 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.

Antirequisites: INB350, ITB624, ITB629, ITB720, ITN524, ITN529, ITN667  Assumed knowledge: INN251 is assumed knowledge.

Equivalents: ITN720  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN351 UNIX 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.

Prerequisites: INN350  Antirequisites: INB351  Equivalents: ITN525, ITN535, ITN721  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN352 NETWORK PLANNING
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.

Antirequisites: INB352, ITN722, ITN551, ITB628, ITB551, ITB722  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-2

INN353 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.

Antirequisites: INB353  Assumed knowledge: INN251 is assumed knowledge.

Equivalents: ITB723, ITN723  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2010 SEM-1

INN355 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.

**Antirequisites:** INB355  
**Assumed knowledge:** Maths B or equivalent (e.g. MAB105) is assumed knowledge.  
**Equivalents:** ITB548, ITB566, ITB646, ITB732, ITN566, ITN512, ITN581, ITN732.  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INN365 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.

**Prerequisites:** INB270 or INN270  
**Antirequisites:** ITB706, ITB745, INB365  
**Assumed knowledge:** Fundamentals of computer architecture; high level programming languages (such as C, C++, C#, Java, python) is assumed knowledge  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-2

**INN370 SOFTWARE DEVELOPMENT**

Understanding software development is an integral part of the IT industry for software engineers. Software development relies on object technologies, programming techniques and numerous code libraries provided by language developers and third party vendors. Integrated Development Environments, unit testing frameworks, automated and continuous build tools and versioning systems are all becoming part of the tool set modern software developers must be familiar with. This unit is designed to introduce these technologies and techniques to show how software can be rapidly developed.

**Antirequisites:** INB370  
**Assumed knowledge:** INN270 is assumed knowledge.  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INN371 DATA STRUCTURES AND ALGORITHMS**

The purpose of this unit is to ensure that you have a sound knowledge of modern programming techniques and their use in providing medium-scale software solutions. This unit will teach you to decompose a problem and produce a modular solution to a programming task. The principles to analyse algorithms for efficiency will also be introduced. In addition, you will acquire the necessary skills for you to use the tools available in common development environments, such as Microsoft Visual Studio.

**Prerequisites:** INN270 or INB270  
**Antirequisites:** INB371, INB372, TB702, ITB711, ITN711  
**Equivalents:** ITN702  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2010 SEM-1

**INN373 WEB APPLICATION 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:** INN370  
**Antirequisites:** INB372, ITB712, ITN662, ITN712, ITB612  
**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

**INN377 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.

**Prerequisites:** INN270, INB270, ITN700, or ITB003  
**Antirequisites:** INB374 and ITB717  
**Equivalents:** ITN717
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: INN385  
Antirequisites: INB386 and ITB259  
Equivalents: ITN259  
Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2010 SEM-2

INN500 PRINCE2 (R) PROJECT MANAGEMENT
The majority of information technology (IT) initiatives, such as systems developments and implementations, are introduced into organizations through projects, and the success of these projects depends on their effective management. This unit covers the integration of the multidisciplinary skills that students would have acquired at stage in the course required to manage IT projects successfully. Specifically, it covers the administrative, technical, communication and socio-political demands placed on modern IT project managers. The unit covers practical, relevant and topical IT project management issues delivered through practical tutorials and lectures.

Prerequisites: Completion of 36 credit points of Postgraduate units (INN% or PUN% or GSN%)
Antirequisites: INB123, ITB365, ITB272  
Credit points: 12  
Contact hours: 4 per week  
Campus: Gardens Point  
Teaching period: 2010 SEM-1 and 2010 SEM-2

INN570 INTERNATIONALISATION OF SOFTWARE
Software is now a global market, and developers need to be able to produce applications that can be used in many different cultures and nations. There is a significant body of enabling technology that allows efficient and cost effective development of applications that can be used in diverse contexts. Understanding the principles and the technologies involved in internationalisation and localisation is essential for companies seeking to go global or that are already global.

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

INN600 ADVANCED READINGS 1
The aim of this unit is to broaden your understanding of potential research topics and methods and support you in developing essential skills that enable clarity and focus in investigating IT research; rigour in evaluating claims and accuracy in your understanding of domain problems, related theories and methodologies appropriate to your specialist area.
Assumed knowledge: Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.  
Credit points: 12  Campus: Gardens Point  
Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

INN601 ADVANCED READINGS 2

The aim of this unit is to broaden your understanding of potential research topics and methods and support you in developing essential skills that enable clarity and focus in investigating IT research; rigour in evaluating claims and accuracy in your understanding of domain problems, related theories and methodologies appropriate to your specialist area.

Assumed knowledge: Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.  
Credit points: 12  Campus: Gardens Point  
Teaching period: 2010 SEM-1, 2010 SEM-2 and 2010 SUM

INN602 ADVANCED READINGS 3

The aim of this unit is to broaden your understanding of potential research topics and methods and support you in developing essential skills that enable clarity and focus in investigating IT research; rigour in evaluating claims and accuracy in your understanding of domain problems, related theories and methodologies appropriate to your specialist area.

Assumed knowledge: Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.  
Credit points: 12  Campus: Gardens Point

INN605 ADVANCED RESEARCH 1

The aim of this unit is to broaden your understanding of potential research topics and methods and support you in developing essential skills that enable clarity and focus in investigating IT research; rigour in evaluating claims and accuracy in your understanding of domain problems, related theories and methodologies appropriate to your specialist area.

Assumed knowledge: Completion of 48 credit points of Postgraduate IT units is assumed knowledge.  
Credit points: 12  Campus: Gardens Point  
Teaching period: 2010 SEM-1 and 2010 SEM-2

INN606 ADVANCED RESEARCH 2

The aim of this unit is to broaden your understanding of potential research topics and methods and support you in developing essential skills that enable clarity and focus in investigating IT research; rigour in evaluating claims and accuracy in your understanding of domain problems, related theories and methodologies appropriate to your specialist area.

Assumed knowledge: INB351, INN351, ITN721 or ITB721 is assumed knowledge.  
Equivalents: ITN771  Credit points: 12  Campus: Gardens Point  
Teaching period: 2010 SEM-1

INN652 ADVANCED CRYPTOLOGY

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 in advanced cryptology. 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.

**Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-2

**INN690 MINOR PROJECT 1**
The aims of this unit are to help you acquire necessary skills in a problem domain, and to enable you to conduct a well-defined project with specific outcomes within a precisely defined project plan. This unit also teaches you how to prepare a well written project report.

**Assumed knowledge:** Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.

**Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN691 MINOR PROJECT 2**
The aims of this unit are to help you acquire necessary skills in a problem domain, and to enable you to conduct a well-defined project with specific outcomes within a precisely defined project plan. This unit also teaches you how to prepare a well written project report.

**Assumed knowledge:** Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.

**Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN692 MINOR PROJECT 3**
The aims of this unit are to help you acquire necessary skills in a problem domain, and to enable you to conduct a well-defined project with specific outcomes within a precisely defined project plan. This unit also teaches you how to prepare a well written project report.

**Assumed knowledge:** Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.

**Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN693 PROJECT**
The aims of this unit are to help you acquire necessary skills in a problem domain, and to enable you to conduct a well-defined project with specific outcomes within a precisely defined project plan. This unit also teaches you how to prepare a well written project report.

**Assumed knowledge:** Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.

**Credit points:** 24  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN695 MAJOR PROJECT**
The aims of this unit are to help you acquire necessary skills in a problem domain, and to enable you to conduct a well-defined project with specific outcomes within a precisely defined project plan. This unit also teaches you how to prepare a well written project report.

**Assumed knowledge:** Completion of at least 48 credit points of Postgraduate level IT units is assumed knowledge.

**Credit points:** 48  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN700 INTRODUCTION TO RESEARCH**
This unit is aimed at those seeking to undertake a major research project. Except in unusual circumstances, you should have a project in mind and have organised a supervisor.

**Assumed knowledge:** Must be con-currently enrolled in either full-time or part-time Higher Research Degree (i.e. PhD, ProDoc, Research Masters, or Honours) or, if coursework masters then a 48cp research project. In all instances, must have a formal Principle Supervisor

**Equivalents:** ITN100  **Other requisites:** Unit Coördinator Approval and a course GPA of at least 5.5 is required to enrol.

**Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INN701 ADVANCED RESEARCH TOPICS**
This unit is designed to allow for the significant development of, or emphasis in, information systems not dealt with in other course units. Selected topics and study areas are offered as required and when the expertise is available. See School of Information Systems announcements for details of topics being offered.

**Equivalents:** ITN269  **Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2010 SEM-1, 2010 SEM-2 and 2010 SUM

**INS450 CCNA 1 AND 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:** INS350   **Equivalents:** ITS701, ITS601, ITB011, ITN011   **Credit points:** 12   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-1 and 2010 SEM-2

**INS451 CCNA 3 AND 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:** INS450 which can be studied in the same teaching period as INS451   **Antirequisites:** INS351   **Equivalents:** ITS702, ITS602   **Credit points:** 12   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-1 and 2010 SEM-2

**INS452 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:** INS451   **Antirequisites:** INS352   **Equivalents:** ITS703   **Credit points:** 12   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-1

**INS453 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:** INS452   **Antirequisites:** INS353   **Equivalents:** ITS704   **Credit points:** 12   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-2

**INS454 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:** INS451   **Antirequisites:** INS354   **Equivalents:** ITS705   **Credit points:** 12   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-1

**INS455 CCNP4: 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:** INS454   **Antirequisites:** INS355   **Credit points:** 12   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Teaching period:** 2010 SEM-2

**INS456 VOICE OVER IP 1**
This unit provides internet technology skills for converged voice and data networks as well as the challenges faced by its various technologies. This unit presents generic solutions and implementation considerations to address those challenges. Students will learn about PSTN, Voice over IP network architecture, Voice over IP system components, features, and Quality of Service (QoS) technologies. In particular this unit focuses on developing understanding on the latest VoIP technologies and skills to build VoIP integrated campus networks.

**Prerequisite(s):** INS450, INS451   **Corequisite(s):** Nil   **Contact hours:** 3 per week   **Campus:** Gardens Point   **Incompatible with:** ITN011, ITN012

**INS457 VOICE OVER IP 2**
This unit provides internet technology skills for converged voice and data networks as well as the challenges faced by its various technologies. This unit presents generic solutions and implementation considerations to address those challenges. Students will learn about PSTN, Voice over IP network architecture, Voice over IP system components, features, and Quality of Service (QoS) technologies. In particular this unit focuses on developing understanding on the latest VoIP technologies and skills to build VoIP integrated campus networks.

**Prerequisite(s):** INS450, INS451   **Corequisite(s):** Nil   **Contact hours:** 3 per week   **Campus:** Gardens Point
Incompatible with: Nil