Master of Information Technology (Security) (IT43)

Year offered: 2012
Admissions: Yes
CRICOS code: 003776E
Course duration (full-time): 1.5 years
Course duration (part-time): 3 years
Domestic Fees (indicative): 2012: $9400 (indicative) per Semester
Start month: February, July
Deferment allowed: No
Total credit points: 144
Standard credit points per full-time semester: 48
Standard credit points per part-time semester: 24
Course coordinator: Dr Ross Hayward
Discipline coordinator: Science and Engineering Faculty
Campus: Gardens Point
Attendance: Part-time, Full-time

Additional Requirements:

To be eligible for this Masters Coursework program, students must meet one of the following criteria:

- Australian equivalent of a bachelor’s degree in any discipline with a grade point average of at least 4.5 (on a 7-point scale)

OR

- Evidence of recognised prior higher learning in the field of Information and Information Technology (e.g. at least five years of relevant full-time work experience). Industry certification alone is not sufficient evidence.

Domestic students:
Domestic students who have completed an undergraduate degree (in any field) with a minimum grade point average (GPA) of at least 4.5 (on a 7-point scale) are eligible for the programs described in this proposal.

Applicants without an undergraduate degree in Information Technology (or equivalent) are recommended to select 3 Basic Elective Units as their electives. These electives are to be taken at the beginning of their studies.

International Students:
International students must complete the above requirements and also achieve an IELTS overall band score of 6.5 or more with no sub-band below 6.0.

International students with an IELTS overall band score between 6.0 and 6.5 with no sub-band below 5.0 are permitted to complete communication units offered by QUT International College as elective units within their Masters degree. These units must be successfully completed in the first semester of the Masters program.

Applicants without an undergraduate degree in Information Technology (or equivalent) are recommended to select 3 Basic Elective Units as their electives. These electives are to be taken at the beginning of their studies.

Course highlights

- Develop a detailed knowledge of the people, products and technologies involved in information security.
- Prepare yourself for a career as an information security specialist, computer systems auditor, information consultant, information assurance professional, or researcher in information security.
- Complete in 1.5 years full-time or 3 years part-time.
- Opportunity to progress on to a Master of Information Technology (Advanced)(Security).

Details:

IT systems are increasingly used to store, process and exchange information ranging from ecommerce applications to critical infrastructure such as utilities, financial institutions, transport and telecommunications networks. Security breaches are routinely reported in the mainstream media, making security assurance no longer a choice but a requirement. Associated with this increased awareness and organisational compliance requirement is a growth in demand for IT personnel with management expertise and technical skills in information security.

Course design

This course offers advanced studies in information security, both in the business and technical sense. You are introduced to a range of information security issues and their broad context: the people, processes and technologies involved with interacting in this new online era. You will explore these topics through participation in projects (research related and industry related) and practice in the community (small groups focusing on particular advanced topics). You will be exposed to a research and industry best-practice environment within QUT’s Information Security Institute through collaboration with its staff and students. You will graduate with an understanding and appreciation of what it means to be a security professional in contemporary global environments.

Career outcomes

Careers include information security specialist, computer systems auditor, information consultant, information assurance professional, information manager and progression to a role as researcher in information security.
Structures and Units
You should meet the following requirements to complete the Masters program:
- you are required to complete 144 credit points of units
- you are required to complete the specified core unit
- if you wish to specialise, you must complete the specific unit requirements for a major
- if you wish to complete your postgraduate studies without a single area of specialisation, you must satisfy the unit requirements for graduation with no major
- you may be allowed to take up to 4 units of electives. These units may be selected from postgraduate units outside of the Science and Engineering Faculty.

IT43 - MIT (Security)

Core
INN500 PRINCE2 (R) Project Management

All of the following units:
INN255 Security
INN651 Security Technologies

In addition, select 5 of the following units:
INN355 Cryptology and Protocols
INN550 Computer Forensics
INN600 Advanced Readings 1
INN601 Advanced Readings 2
INN602 Advanced Readings 3
INN605 Advanced Research 1
INN606 Advanced Research 2
INN607 Advanced Research 3
INN652 Advanced Cryptology
INN690 Minor Project 1
INN691 Minor Project 2
INN692 Minor Project 3
INN693 Project
INN694-1 Project 1
INN694-2 Project
INN695 Major Project
INN696-1 Major Project 1
INN696-2 Major Project 2
INN700 Introduction To Research
GSN440 Risk Management 1
JSN106 Analytical Methods of Intelligence

Elective Units
Select any four Postgraduate Units

Postgraduate IT Units

Unit List:
INN120 Corporate Systems
INN101 Impact of IT
INN122 Organisational Databases
INN124 Information Systems Development
INN180 Computer Games Studies
INN181 Introduction to Games Production
INN210 Databases
INN220 Business Analysis
INN221 Technology Management
INN250 Foundations of Computer Science
INN251 Networks
INN255 Security
INN270 Programming
INN271 The Web
INN272 Interaction Design
INN280 Fundamentals of Game Design
INN311 Enterprise Systems
INN312 Enterprise Systems Applications
INN313 Electronic Commerce Site Development
INN320 Business Process Modelling
INN321 Business Process Improvement
INN322 Information Systems Consulting
INN330 Information Management
INN331 Management Issues for Information Professionals
INN332 Information Retrieval
INN333 Information Programs
INN335 Information Resources
INN340 Database Design
UNIT SYNOPSES

GSN440 RISK MANAGEMENT 1
This unit examines the role of risk management in contemporary management theory and practice. Key decision areas of risk (eg financial, human resource, physical - asset management etc) are considered in the context of the general management of the organisation.

Credit points: 6  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 6TP6

INN101 IMPACT OF IT
You will gain an appreciation of the massive and positive impact that IT has had on a wide range of fields including...
business, science, engineering, education and health. You will learn about the benefits of increased productivity due to IT. You will consider ethical issues and possible negative impacts of IT. You will raise your awareness of the social implications of IT systems for society at the global, local and personal levels. You will develop an informed position on issues, and justify your reasoning with considered supportive arguments.

**Antirequisites:** INB101, ITB361, ITN361  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1 and 2012 SEM-2

**INN120 CORPORATE SYSTEMS**
This unit has the aim to introduce you broadly to your field of study and to assist you in identifying an appropriate study career path that suits your skills and interest. To that end, this unit aims to give you a broad overview of the nature and role of socio-technical information systems in corporate business settings, and the role that corporate systems managers perform within the major business domains in which they operate.

**Antirequisites:** ITN360 and INB120  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**INN122 ORGANISATIONAL DATABASES**
The aim of this unit is to teach students how databases and database-driven websites are used in organisational environments, their role in information technology, the importance of the information architecture behind the external representation of a database, issues of security, privacy, accessibility, and the social and ethical implications around databases.

**Antirequisites:** INB122, ITB362, ITN365  
**Equivalents:** ITN122  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**INN124 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.

**Antirequisites:** INB124  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**INN180 COMPUTER GAMES STUDIES**
This unit is designed to give you a clear understanding of the socio-cultural issues that affect the computer game industry. Through critical review of games and games industry literature, playing games and actively participating in classroom discussion you will develop your capacity to join in the discourse about the design, impact and future direction of computer games in our society.

**Antirequisites:** INB180, ITB750  
**Equivalents:** ITN750  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**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:** 2012 SEM-2

**INN204 SPECIAL TOPIC 1**

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1 and 2012 SEM-2

**INN205 SPECIAL TOPIC 2**

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

**INN210 DATABASES**
Databases and database systems are essential items that support many aspects of everyday life in modern society. All graduates from a course in Information Technology will be expected by employers to understand the concepts and terminology of databases. The aim of this unit is to introduce you to the structure and role of databases in modern organisations.

**Antirequisites:** INB210  
**Equivalents:** ITN200  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**INN220 BUSINESS ANALYSIS**
This unit is aimed 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).

**Antirequisites:** INB220  **Equivalents:** ITB222, ITB365, ITN222, ITN365  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 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:** 2012 SEM-1

**INN250 FOUNDATIONS OF COMPUTER SCIENCE**
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. Most of the techniques are derived from the field of Discrete Mathematics and are the foundation of the discipline called Computer Science.

**Antirequisites:** INB250  **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:** 2012 SEM-2

**INN251 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:** INB251  **Equivalents:** ITN701  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-2

**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, ITB161, ITB523, ITB623, ITB730  **Equivalents:** ITN161, ITN511, ITN523, ITN663, ITN730  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-1

**INN270 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.

**Antirequisites:** INB270  **Equivalents:** ITN700  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-1 and 2012 SEM-2

**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: INN373, INB373
Assumed knowledge: Basic programming and database knowledge is assumed.
Equivalents: ITB007, ITB227, ITN007
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2012 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: 2012 SEM-2

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: 2012 SEM-2

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 and reward a player for completing it, how to ensure that the player knows how to progress through the game 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: 2012 SEM-1

INN304 SPECIAL TOPIC 3

Prerequisites: INN210 or INN004 or INN122
Credit points: 12
Campus: Gardens Point
Teaching period: 2012 SEM-1 and 2012 SUM

INN305 SPECIAL TOPIC 4

Credit points: 12
Campus: Gardens Point
Teaching period: 2012 SEM-1 and 2012 SUM

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: 2012 SEM-2

INN312 ENTERPRISE SYSTEMS APPLICATIONS

The aim of this unit is to introduce business configuration aspects of a large Enterprise Systems (also referred to as ERP systems) application. The unit commences with an introduction to concepts of large system implementations, requirements gathering and analyses. The unit then teaches how to configure a large Enterprise Systems application (using SAP) for common business processes in an organization. The course also aims to provide hands-on experience of configuring a range of SAP modules. 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: 2012 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.

INN320 BUSINESS PROCESS MODELLING
This unit will teach you the foundations of business process modelling. You will learn how to use standard process modelling notations such as BPMN to capture organizational business processes in a consistent and unambiguous way, and to reason about these models.

INN321 BUSINESS PROCESS IMPROVEMENT
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.

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.

INN330 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.

INN331 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.

INN332 INFORMATION RETRIEVAL
The ability to quickly learn and expertly use new information resources and concepts is a vital skill for the modern day. 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 needs. The unit will also help you develop skills in teamwork and oral and written communication.

INN333 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.

**Antirequisites:** ITN330  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 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.

**Antirequisites:** INB335, INN332, ITN273  
**Equivalents:** ITN332  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**INN340 DATABASE DESIGN**

The aim of this unit is to help you develop your knowledge, understand a formal specification tool (ERM/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 ITN200 is assumed knowledge  
**Equivalents:** ITN229  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 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 ITN200 or INN122 or ITB004  
**Antirequisites:** INB341, ITB223  
**Equivalents:** ITN223  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**INN342 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:** INN210 or INN340 or INN122  
**Antirequisites:** ITB239, INB342  
**Equivalents:** ITN239  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**INN343 DATA WAREHOUSING AND MINING**

This unit teaches the foundations of data warehousing and mining for producing systems that provide valuable services and decision support to business companies. Through this study, you will be able to demonstrate knowledge of the principles and techniques of data warehouse architecture and schema, OLAP and data cubes, ETL and data quality, patterns and sequences mining, association analysis, and decision tables. You will also be able to use and develop smart data services for business intelligence.

**Prerequisites:** INN210  
**Antirequisites:** INB343  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**INN344 SEARCH ENGINE TECHNOLOGY**

Search engines are becoming ubiquitous not only for finding web pages but also as a key part of companies’ infrastructure. Database systems only allow access to structured data which are only the tip of the iceberg of the vast amount of information that also sits in unstructured files such as word documents, reports, email messages, etc. Industry is now realising the high value of this free text information and deploying the means to use it. Processing this information requires natural language processing for extracting meaningful relations and semantics as well as efficient indexing processes that together compose search engine technology.

Today, search technology is a hot area of research and development with applications in data warehousing, e-commerce, digital libraries, bioinformatics, and web information systems in general.

**Antirequisites:** INB344  
**Assumed knowledge:** Intermediate programming experience with intermediate-level knowledge of data structures and algorithms  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**INN345 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.

Antirequisites: INB345 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2012 SEM-1

INN346 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.

Antirequisites: INB346 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2012 SEM-2

INN347 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.

Antirequisites: INB347 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2012 SEM-1

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: 2012 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: 2012 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, ENN523 Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2012 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: 2012 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, Credit points: 12 Contact hours: 3 per week Campus: Gardens Point Teaching period: 2012 SEM-1 and 2012 SEM-2

INN360 MODELLING AND SIMULATION SCIENCE
This unit aims to give students an understanding of computational techniques used for simulations (and visualisation) in a selection of application areas where the
scientific problems are characterized by widely varying spatial and temporal scales. Through this study you will be able to demonstrate knowledge of the development and implementation of simulation algorithms and the analysis of resulting data using multi-dimensional visualisation techniques.

**Prerequisites:** INN270  
**Antirequisites:** MAN480  
**Assumed knowledge:** Programming experience (such as Python, C#, C, Java); Sound Achievement in Senior Mathematics B; No prior knowledge of MATLAB or NetLogo is required; Mathematical techniques will be introduced as needed  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 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 software 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:** INN270 or ITB003 or INB270  
**Antirequisites:** ITB706, ITB745, ITB365  
**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:** 2012 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:** 2012 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:** 2012 SEM-1

### INN372 AGILE SOFTWARE DEVELOPMENT

This unit examines the theory, techniques, and technologies associated with the specification, design, construction and testing of software systems. It integrates specialist knowledge from previous units to prepare you to become a professional software engineer. By the end of this unit, you will have a firm understanding of the principles of software development processes, and the detailed practices of a modern agile methodology. This will extend and refine your knowledge of the traditional software development lifecycle and testing, and putting your new knowledge into practice. You will work together in small teams of four to six people to build a project using an agile methodology and using test-driven development strategies. You will thus be well-prepared to become a member of a professional development team.

**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:** 2012 SEM-2

### INN373 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:** INN271 or INB271  
**Antirequisites:** INB373  
**Equivalents:** ITB716, ITN716  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

### INN374 ENTERPRISE SOFTWARE ARCHITECTURE

This unit introduces you to the field of enterprise and component-based architecture. It provides a grounding in the knowledge and skills required by a software architect to
address the future needs of business IT systems. These include a solid understanding of the IT challenges currently facing medium to large organizations, the theory and technologies used to address them, and an appreciation of the business needs that motivate their use. To enable you to address these challenges you will be exposed to system design methods, and the current technologies, that allow the resulting systems to be adaptive to changing business needs.

**Prerequisites:** INN270, INB270, ITN700, or ITB003
**Antirequisites:** INB374 and ITB717  **Equivalents:** ITN717
**Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-2

**INN381 MODELLING AND ANIMATION TECHNIQUES**

The development of computer graphics tools is a significant application within the IT, Games and related industries, relying heavily on software engineering methodologies. These tools, such as CAD systems, 3D modelling systems and games engines, are used in such industries as advertising, engineering, manufacturing, simulation for education and training, computer games, film special effects, etc. Modelling techniques are intrinsic to a 3D graphics system, especially one used for real time animation. With increased CPU and GPU power, the ability to animate in real time is allowing more sophisticated interaction and the merger of games/simulation and film. 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 or INN371) and (MAB281 or MAN281)  **Antirequisites:** INB381, ITB441, ITB460, ITB648, ITB649, ITB746  **Equivalents:** ITN440, ITN460, ITN746  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-2

**INN382 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:** INN381 and MAB281  **Antirequisites:** INB382  **Equivalents:** ITN747  **Credit points:** 12  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-1

**INN385 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:** INB385  **Assumed knowledge:** INN271 is assumed knowledge. INN272 should be enrolled in the same teaching period.  **Equivalents:** ITN257, ITB257  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-1

**INN396 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:** INN385  **Antirequisites:** INB386 and ITB259  **Equivalents:** ITN259  **Credit points:** 12  **Contact hours:** 3 per week  **Campus:** Gardens Point  **Teaching period:** 2012 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 multi-disciplinary skills that students would have acquired at stage 2 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 workshops and lectures.

**Prerequisites:** Completion of 36 credit points of Postgraduate or International College Diploma units (INN% or QCD% or GSN%)  **Antirequisites:** INB123, ITB365, ITB272  **Equivalents:** ITN272  **Credit points:** 12  **Contact hours:** 4 per week  **Campus:** Gardens Point  **Teaching period:** 2012 SEM-1 and 2012 SEM-2

**INN530 ONLINE INFORMATION SERVICES**
The primary aim of this unit is to provide a capstone experience that will allow you to draw on the knowledge and skills you have gained throughout your course. The unit focuses on the development of your skills and knowledge in web service delivery. You will have the opportunity to learn from industry experts and to reflect on how your studies have prepared you for this type of work. Through practical exercises, lectures, workshops and guest speakers, you will develop an introductory knowledge of web content management as it applies to organisations today. You will also be introduced to current trends and issues in web service delivery. You will develop an appreciation of the tasks, practices, principles and policies required for dynamic forms of web architecture, and you will begin to explore the development of skills required to work with and manage content management systems.

Equivalents: ITN278  Credit points: 12  Campus: Gardens Point  Teaching period: 2012 SEM-1

INN531 COLLECTIONS MANAGEMENT
This unit seeks to develop your understanding of the key issues involved in developing and managing a contemporary and innovative collection. In particular you will be given the opportunity to become familiar with the methods and tools used in the selection and acquisition of information resources and the creation of information collections to meet the specific needs of a community or client group. You will also develop a working knowledge of the skills and techniques essential for critically evaluating the resources and collections created. The unit further seeks to develop your oral and written communication skills, critical thinking and teamwork skills.

Equivalents: ITN276  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 SEM-1

INN532 INFORMATION LITERACY EDUCATION
This unit aims to develop your understanding of information literacy and information literacy education and how these concepts can be applied according to the needs of client group(s) of your choice. As a professional you may engage in policy development, advocacy, research, developing and implementing instruction programs or managing staff who undertake these activities. New professionals and other educators can become heavily involved in teaching information literacy and skills to learners in a range of environments including academic, workplace or community programs. This unit provides the opportunity for theoretical and practical work in contexts of your choice to suit your individual interests.

Equivalents: ITN279  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 SEM-1

INN533 INFORMATION ORGANISATION
The aim of this unit is to develop an understanding of the principles and practices of information organisation as applied to description and classification of knowledge contained in a range of information resources utilised in different contexts.

Equivalents: ITN275  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 SEM-2

INN540 USER EXPERIENCE
Understanding users and their experiences is a vital dimension of IT professionals’ competence and ethical awareness. People experience information and technology in a wide range of contexts, increasingly digital environments on a daily basis. Understanding people’s experience provides an important foundation for design and evaluation of a wide range of technologies and user contexts. This subject provides an opportunity for you to explore your own experience as user and also the experience of others. You will explore the experience of others, through engaging with them directly or via technology, and by engaging with a wide range of resources that inform us about users’ experiences. The aim of this unit is to introduce students to understanding and investigating users’ experiences in contexts that interest them, with particular emphasis on digital environments.

Assumed knowledge: 24 credit points of INN units

Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 SEM-2

INN550 COMPUTER FORENSICS
This unit aims to give you instruction in the principles of Computer Forensics, and the principles that need to be observed by the computer forensic investigator in order to successfully identify, secure, analyse and present digital evidence. In this advanced level elective unit we focus on the principles which direct the collection, analysis and presentation of the electronic or digital evidence available to a forensic investigator, and the techniques that are used in order to ensure that those principles are met for evidentiary requirements.

Assumed knowledge: INN255 is assumed knowledge. INN250 and INN251 should be enrolled in the same teaching period. Equivalents: ITN774  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2012 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: 2012 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: 2012 SEM-1, 2012 SEM-2 and 2012 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: 2012 SEM-1, 2012 SEM-2 and 2012 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  Teaching period: 2012 SEM-1, 2012 SEM-2 and 2012 SUM

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.

Prerequisites: INN320 or INN321 with a grade of 6 and a GPA of at least 6

Credit points: 12  Campus: Gardens
INN632 PROFESSIONAL PRACTICE
This unit has been developed as an overarching unit in the IT70 Master of Information Management program, to establish meaningful links between the various units of study and to introduce you to contemporary professional practice in information agencies. The unit focuses on your own personal and professional development, enabling you to participate in industry seminars, fieldtrips, work placements and career mentoring. The development of your understanding of reflective practice will help you build your own Student ePortfolio to document your insights into and your experiences in the information profession. The unit is structured as a sequence of six modules, completed as you progress through the course.

Prerequisites: INN632-1  
Equivalents: ITN280-6  
Credit points: 2  
Campus: Gardens Point  
Teaching period: 2012 SEM-1 and 2012 SEM-2

INN632 PROFESSIONAL PRACTICE
This unit has been developed as an overarching unit in the IT70 Master of Information Management program, to establish meaningful links between the various units of study and to introduce you to contemporary professional practice in information agencies. The unit focuses on your own personal and professional development, enabling you to participate in industry seminars, fieldtrips, work placements and career mentoring. The development of your understanding of reflective practice will help you build your own Student ePortfolio to document your insights into and your experiences in the information profession. The unit is structured as a sequence of six modules, completed as you progress through the course.

Prerequisites: INN632-1  
Equivalents: ITN280-2  
Credit points: 2  
Campus: Gardens Point  
Teaching period: 2012 SEM-1 and 2012 SEM-2

INN632 PROFESSIONAL PRACTICE
This unit has been developed as an overarching unit in the IT70 Master of Information Management program, to establish meaningful links between the various units of study and to introduce you to contemporary professional practice in information agencies. The unit focuses on your own personal and professional development, enabling you to participate in industry seminars, fieldtrips, work placements and career mentoring. The development of your understanding of reflective practice will help you build your own Student ePortfolio to document your insights into and your experiences in the information profession. The unit is structured as a sequence of six modules, completed as you progress through the course.

Prerequisites: INN632-1  
Equivalents: ITN280-4  
Credit points: 2  
Campus: Gardens Point  
Teaching period: 2012 SEM-1 and 2012 SEM-2
INN650 ADVANCED NETWORK MANAGEMENT
The aim of this unit is to provide you with an understanding of the advanced technical issues pertaining to the management of organisational networks of various sizes. You will use the Unix environment as the learning platform for attaining additional technical skills and for the enhancement of existing problem solving skills necessary to be a successful network administrator or manager.
Prerequisites: INB351 or INN351 Assumed knowledge: INB351, INN351, ITN721 or ITB721 is assumed knowledge.
Equivalents: ITN771 Credit points: 12 Campus: Gardens Point Teaching period: 2012 SEM-1

INN651 SECURITY TECHNOLOGIES
This unit aims to provide you with the knowledge to investigate and determine the security requirements for computer systems and networks and to understand the underlying issues and problems. In addition, this unit aims to enable you to investigate, evaluate and select the most appropriate security technologies for specific situations.

Antirequisites: ITB731, ITN731 Assumed knowledge: It is an advantage that the student has knowledge of the basic principles and technologies for information security, such as those taught in INN255 Security. Credit points: 12 Campus: Gardens Point Teaching period: 2012 SEM-2

INN652 ADVANCED CRYPTOLOGY
Cryptology forms a core discipline in the study of information security. This unit concentrates on the latest developments in cryptology. This is a specialised unit that prepares postgraduate students for research in cryptology. The aim of the unit is to explore and understand recent developments in the theory and practice of cryptology. The unit provides fundamental knowledge for students seeking to undertake postgraduate research or work in the area of information security, especially involving cryptology.
Credit points: 12 Campus: Gardens Point Teaching period: 2012 SEM-1

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: 2012 SEM-1, 2012 SEM-2 and 2012 SUM

INN691 MINOR PROJECT 2
This 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: 2012 SEM-1, 2012 SEM-2 and 2012 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: 2012 SEM-1, 2012 SEM-2 and 2012 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: 2012 SEM-1, 2012 SEM-2 and 2012 SUM

INN694 PROJECT
This unit enables you to carry out an independent or group project addressing a research question or practical problem in theoretical or practical information technology. It provides an opportunity to individualise your studies by concentrating on a specific problem. 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.
Prerequisites: INN694-1. INN694-1 may be studied in the same teaching period as INN694-2. 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: 2012 SEM-1, 2012 SEM-2 and 2012 SUM
on a specific problem. 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. Students must enrol in INN694-2 to receive a result.

**Other requisites:** Students must complete INN694-2 to receive a grade for this unit  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1, 2012 SEM-2 and 2012 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:** 2012 SEM-1, 2012 SEM-2 and 2012 SUM

**INN696 MAJOR 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. Students must enrol in INN696-2 to receive a result.  
**Other requisites:** Students must complete INN696-2 to receive a grade for this unit  
**Credit points:** 24  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1, 2012 SEM-2 and 2012 SUM

**INN696 MAJOR 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.

**Prerequisites:** INN696-1. INN696-1 may be studied in the same teaching period as INN696-2.  
**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:** 2012 SEM-1, 2012 SEM-2 and 2012 SUM

**INN700 INTRODUCTION TO RESEARCH**

This unit is aimed at students undertaking a major research project (see corequisites above). In order to pursue such a project, you must have some insight into the range of possible approaches to research available. Before commencing the research proper, it is necessary to review related literature in depth and prepare a detailed proposal outlining the research question, design and project plan. Quality control and good project management must be exercised throughout the research project. Main items of assessment pertain to each student's unique, research project being pursued in parallel. This unit aims to give you insight into the range of possible approaches to research, to develop the skills needed to prepare your literature review and research proposal and to assist you in planning and managing time and resources.

**Prerequisites:** Admission into IT28 or IT29.  
**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  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1 and 2012 SEM-2

**INN701 ADVANCED RESEARCH TOPICS**

All research students need an appreciation of a wide variety of potential approaches to conducting research and an understanding of the key issues that bear on such approaches. INN701 is an advanced unit aimed at research students who are soon to complete a detailed, rigorous and defensible design of their intended research project (e.g. Stage 2). Research students, coursework masters students and honours students intending undertaking a major research project should pursue INN701 either subsequent to, or in parallel with INN700.

**Prerequisites:** INN700 which can be studied in the same teaching period as INN701.  
**Assumed knowledge:** INN700 may be waived for invited, advanced, high-performing undergrads.  
**Equivalents:** ITN269  
**Other requisites:** Except with special permission, this unit is restricted to and mandatory for students enrolled in Honours, Professional Doctorate and PhD courses, and is optional for Research Masters students.  
**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1 and 2012 SEM-2

**INS040 PROFESSIONAL EXPERIENCE (POSTGRADUATE)**

Advanced Standing may be applied for Professional/Industry Experience. For application instructions, please refer to:  
Credit points: 12    Campus: Gardens Point    Teaching period: 2012 SEM-1 and 2012 SEM-2

**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: 2012 SEM-1 and 2012 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    Credit points: 12    Contact hours: 3 per week    Campus: Gardens Point    Teaching period: 2012 SEM-1 and 2012 SEM-2

**INS452 CCNP ROUTE**
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 prepares you with advanced level of study on WAN technologies.

**Antirequisites:** INS352    **Equivalents:** ITS703    Credit points: 12    Contact hours: 3 per week    Campus: Gardens Point    Teaching period: 2012 SEM-1

**INS454 CCNP SWITCH**
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.

**Antirequisites:** INS354    **Credit points:** 12    **Contact hours:** 3 per week    **Campus:** Gardens Point    **Teaching period:** 2012 SEM-2

**INS456 CISCO SECURITY**
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.

**Prerequisites:** INS450    **Antirequisites:** INS356    **Equivalents:** ITS703    Credit points: 12    Campus: Gardens Point    Teaching period: 2012 SEM-1

**INS457 CISCO VOIP**
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 network for campus networking environment. The aim of this unit is to prepare students for the topics covered in CISCO CCNA Voice Exam (640-460 IUC Implementing Cisco IOS Unified Communications OR 642-436 CVOICE 6.0 Cisco Voice Over IP). This unit aims to build important knowledge and skills necessary to build the VoIP integrated campus network.

**Prerequisites:** INS450    **Antirequisites:** INS357    **Equivalents:** INS350    Credit points: 12    Campus: Gardens Point    Teaching period: 2012 SEM-2

**JSN106 ANALYTICAL METHODS OF INTELLIGENCE**
Over the last decade or so selected technological advances have enhanced the ability of policing and intelligence agencies to collate and analyse large amounts of data and then display the links and associations in a visual manner. By doing this the respective gaps and areas requiring additional input of information become evident, thus enhancing the gathering of information and promoting the success of the investigation. As the use of the available computer software is the contemporary professional standard it is incumbent on individuals employed within this
environment to utilise the data analysis software. 

**Antirequisites:** JSB376  
**Credit points:** 12  
**Contact hours:** Intensive block  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2

**JSN114 CYBERCRIME**

**Antirequisites:** JSB974  
**Credit points:** 12  
**Campus:** Internet and External

**LWN117 CYBER LAW AND POLICY**

This unit examines legal issues relating to the Internet. The unit will consider the application of existing legal principles to "cyberspace" as well as newly developed Internet Law or Cyberlaw principles. Knowledge of Internet Law is of increasing importance in many areas of legal practice, industry and to society more generally. This is a new area of activity and it is important to educate lawyers and other professionals on the unique issues that have arisen and will emerge in this area, in particular the difficulty in regulating the distributed international network of computers known as the "internet".

**Credit points:** 12  
**Contact hours:** 2 hrs per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**MAN778 APPLICATIONS OF DISCRETE MATHEMATICS**

This unit has two main areas of study. One is the application of graph theory to a number of practical problems including trees and shortest path algorithms. The other area is advanced number theory and includes the topics of divisibility, congruence, multiplicative functions, primitive roots, quadratic residues and applications to cryptology including the RSA algorithm.

**Prerequisites:** MAN461 or MAB621  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1

**MGN433 MANAGING HIGH-PERFORMANCE ORGANISATIONS**

Managing High-Performance Organisations is designed to provide a bridge between HRM-discipline specific and strategic/general management perspectives. The unit is therefore a centrepiece of the postgraduate HRM program. The unit serves the vitally important role of locating HRM in to its broader organisational and general management context. It also aims to develop advanced level business knowledge and skill and develop conceptual frameworks for integration and high level impact of HRM with business success and performance.

**Prerequisites:** MGN409  
**Credit points:** 12  
**Contact hours:** 3  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-1 and 2012 SEM-2

**MGN423 CONTEMPORARY STRATEGIC ANALYSIS**

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

**Antirequisites:** BSN407 and MGN504  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2012 SEM-2