Bachelor of Information Technology - Dean's Scholars Program (IT22)

Year offered: 2011
Admissions: No
CRICOS code: 012656E / 017323G
Course duration (full-time): 3 years
Domestic Fees (indicative): 2011: CSP $3,886 (indicative) per semester
International Fees (indicative): 2011: $11,375 (indicative) per semester
QTAC code: 416002
Past rank cut-off: 96. Also see entry requirements
Past OP cut-off: 3. Also see entry requirements
Assumed knowledge: English (4, SA) and Maths A, B or C (4, SA)
Preparatory studies: For information on acquiring assumed knowledge visit http://www.qut.edu.au/assumed-knowledge
Course coordinator: Mr Richard Thomas
Campus: Gardens Point

Financial Support
Domestic students offered a place in the Dean's Scholars Program will have their undergraduate HECS paid by the Faculty and those proceeding to Honours will also receive full HECS support.

International students will have one-third of their tuition fees paid by the faculty for the undergraduate and honours programs.

Students are responsible for all other costs associated with their program.

Cooperative Education Program
The Faculty’s Cooperative Education Program gives you the opportunity of 10-12 months paid industry placement during your course where you can integrate real experience with what you’re learning in your degree. Students wishing to participate in the Cooperative Education Program should be aware that they will not receive financial support as a Dean's Scholar for the duration of the placement.

Find out more about the Cooperative Education Program.

Limits on grades of 3
A new policy concerning grades of 3 came into effect from 1 January 2009 (QUT MOPP C/5.2). With effect from this date grades of 3 are no longer considered a conceded or low pass but are classified as a fail grade. Any grades of 3 awarded prior to 1 January 2009 retain the conceded pass status and will be counted for graduation purposes up to the maximum number of grades of 3 permitted for your course. Grades of 3 incurred in units that commence after 1 January 2009 will not count towards your degree. Further information is available on the Student Services website.

Deferment
QUT’s deferment policy does not apply to this course.

Professional Recognition
As a graduate of the Dean's Scholars Program you will be qualified for professional accreditation and employment in fields relevant to your specialisation.

New Unit Translations/Incompatibility Table
Details on the translation and incompatibility of old and new units is located here: Undergraduate Translation Table and 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 the following:

Richard Thomas
Phone: +61 7 3138 2782
Email: enquiry.scitech@qut.edu.au

Bachelor of Information Technology

Course Structure

Recommended Core Unit Progression

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

Year 2, Semester 1
Block B or Block C Unit
Block B or Block C Unit
Block B or Block C Unit
Block B or Block C Unit
Block B or Block C Unit

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

Year 2, Summer
INB302  IT Capstone Project
Undertaken over four (4) weeks.

Year 3, Semester 1
INB311  Enterprise Systems
INB340  Database Design
INB220  Business Analysis

INN Elective Units
INB312  Enterprise Systems Applications
INB272  Interaction Design
INB313  Electronic Commerce Site Development
INB322  Information Systems Consulting
INB320  Business Process Modelling
INB365  Systems Programming
INB370  Software Development
INB373  Web Application Development
INB374  Enterprise Software Architecture
INB381  Modelling and Animation Techniques
INB382  Real Time Rendering Techniques
MAB281  Mathematics for Computer Graphics
MAB281 is only to be used as a prereq for INB381

Information Systems Major

Compulsory Units
INB311  Enterprise Systems
INB340  Database Design
INB220  Business Analysis

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

Network Systems Major

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

Electives
INB312  Enterprise Systems Applications
INB365  Systems Programming
INB353  Wireless and Mobile Networks
INB355  Cryptology and Protocols
Potential Careers:
Computer Game Programmer, Computer Games Developer, Computer Salesperson/Marketer, Computer Systems Engineer, Data Communications Specialist, Database Manager, Electrical and Computer Engineer, Information Officer, Information Security Specialist, Internet Professional, Manager, Multimedia Designer, Network Administrator, Network Manager, Programmer, Project Manager, Software Engineer, Systems Analyst, Systems Manager, Systems Programmer, Systems Trainer, Web Designer.

UNIT SYNOPSES

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

Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

INB220 BUSINESS ANALYSIS
This unit aims to give you an understanding of 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: INN220  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

INB221 TECHNOLOGY MANAGEMENT
This unit presents operational, tactical and strategic insights that support the activities central to the leadership and management of technology. These insights include project management, organisational leadership, outsourcing, planning, governance and millennium technologies. Such insights are used to inform decision-making - the core skill of any manager. Technology managers must understand the factors influencing any decision point. This unit equips students for the challenges of management and to contribute to the decision-making faced by managers and the staff who advise on these issues.

Prerequisites: INB103 or ITB002 or INB120 or ITB360  Antirequisites: ITN241, ITN251 and ITN366  Equivalents: ITB366, ITB241  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

INB251 NETWORKS
Computer systems and communications networks are essential to the activities of modern organisations. When you graduate from a course in Information Technology, employers expect you to have a sound understanding of the terminology and concepts of computer systems, communications networks, and network services. This unit provides you with an introductory study of communications network technologies and network applications. The unit serves as an entry point to further specialised studies in the field of computer network systems.

Antirequisites: INN251  Equivalents: ITB006  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

INB255 SECURITY
This unit aims to give you an understanding of the major issues in information security. You will be able to identify critical information security concepts and determine the information security implications of interactions between entities. You will have knowledge of a range of techniques for protecting information, and understand the limitations of these techniques. You will be aware of international information security management standards.

Antirequisites: ITB161, ITB523, ITB623, ITN161 and INN255  Equivalents: ITB730  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

INB270 PROGRAMMING
This unit aims to give you a positive introduction to the skills required in solving computational problems and implementing solutions in a programming or scripting language. Although some theoretical aspects of computer programming are introduced briefly, the overall emphasis of the unit is programming practice. The unit emphasises generic programming concepts and related problem-solving strategies. The skills you learn in this unit will be applicable to a wide variety of commonly-used, industrially-significant programming and scripting languages.

Prerequisites: INB104 or ENB246  Antirequisites: INN270  Equivalents: ITB003  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point
Teaching period: 2011 SEM-1 and 2011 SEM-2

INB271 THE WEB
The aims of the unit are to give you a thorough understanding of what the web is, how it works and what it has to offer. Additionally, the unit aims to give you a general understanding and basic skills in developing dynamic web applications, including an appreciation of the variety of implementation technologies available. Through an understanding of how web technologies have evolved to date, you will appreciate the necessity for lifelong learning and become an insightful predictor of future developments in this area. You will learn to critically analyse technological alternatives in order to adapt to and innovate with technologies that presently do not exist. You will appreciate the business or organizational context within which web applications exist and be skilled in communicating within that environment. You will appreciate the social and ethical issues relating to web based systems including accessibility, globalization, privacy, and piracy.

Prerequisites: INB104  Antirequisites: INB373 and INN373 and ITB007 and ITB227 and ITN007 and ITN227
Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1

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

Prerequisites: INB103 or INB181  Equivalents: ITB254
Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

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

Antirequisites: ITB009  Assumed knowledge: Completion of 120 credit points within BIT is assumed
Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-1 and 2011 SEM-2

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

Prerequisites: INB301  Assumed knowledge: Students are expected to have a solid IT background knowledge (e.g., completion of at least 192 credit points)
Equivalents: ITB010  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2 and 2011 SUM

INB311 ENTERPRISE SYSTEMS
The unit presents and discusses the Enterprise Systems Lifecycle model, orienting students to the requirements of addressing total cost of ownership, change management requirements and process modelling requirements in order to achieve business benefits. Concepts of Enterprise Systems success and associated enablers and barriers are also introduced. This unit introduces the technical architecture of complex 3-tiered client server environments. It seeks to show how an integrated complex database environment meets common business needs, and yet fails to meet the total Information Systems requirements.

Antirequisites: INN311  Credit points: 12  Contact hours: 3 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

INB312 ENTERPRISE SYSTEMS APPLICATIONS
The aim of this unit is to introduce one of the more complex and comprehensive Enterprise Systems applications. This unit introduces the business perspective and application processes of modules (such as FI, CO, PP, MM and SD&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: ITB233, INN312  Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-1

INB313 ELECTRONIC COMMERCE SITE DEVELOPMENT

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

Equivalents: ITB260  Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-2

INB320 BUSINESS PROCESS MODELLING

The aim of this unit is to introduce you to modern methodologies of business process modelling. A main objective is to increase your awareness of the conceptual foundation of modelling and for the capabilities of BPMN and available tools. You will learn how to use grammars and tools to build, maintain and communicate practically relevant process models.

Equivalents: ITB298  Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-2

INB322 INFORMATION SYSTEMS CONSULTING

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

Antirequisites: ITB264, ITN264  
Assumed knowledge: Completion of 96 credit points of an Undergraduate study is assumed knowledge  
Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-1

INB340 DATABASE DESIGN

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

Prerequisites: INB210 or ITB004  
Antirequisites: ITB229  
Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-1

INB341 SOFTWARE DEVELOPMENT WITH ORACLE

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

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

Prerequisites: INB210 or ITB004 or INB122  
Equivalents: ITB223  
Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-2

INB342 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: INB122 or INB210 or INB340 or AYB114  
Antirequisites: INN342  
Credit points: 12  
Contact hours: 3 per week  
Campus: Gardens Point  
Teaching period: 2011 SEM-2

INB350 INTERNET PROTOCOLS AND SERVICES

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

Prerequisites: INB251 or ITB006 or ITB510
Antirequisites: ITB624, ITB629, ITB720, ITN525, ITN667, ITN720
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

INB351 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: INB350
Equivalents: ITB721, ITB625, ITB535, ITB525
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-2

INB352 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.

Prerequisites: INB350
Antirequisites: ITB551, ITB628, ITB722, INN352, ITN551, ITN722, ENN523
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-2

INB353 WIRELESS AND MOBILE NETWORKS

This unit provides you with the skills to be able to design and understand the issues involved with different types of wireless communications systems. It develops your knowledge of Wide Area Networks (WANs), Local Area Networks (LANs) and Personal Area Networks (PANs) as well as skills in programming for mobile handsets. You will also develop knowledge of the different types of wireless communications technologies available and when each is most applicable in a particular situation.

Prerequisites: INB251 or ITB006
Antirequisites: ITN723
Assumed knowledge: Networks or equivalent networking knowledge is assumed knowledge
Equivalents: ITB723
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

INB355 CRYPTOLOGY AND PROTOCOLS

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

Antirequisites: ITB646, ITB548, ITB566
Assumed knowledge: Maths B or equivalent is assumed knowledge.
Equivalents: ITB732
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

INB365 SYSTEMS PROGRAMMING

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

Prerequisites: INB270 or ITB003 or INB371
Antirequisites: ITB745, ITB706, INN365
Assumed knowledge: Fundamentals of computer architecture; high level programming languages (such as C, C++, Java Python) is assummed knowledge.
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-2

INB370 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.

Prerequisites: INB270 or ITB003
Credit points: 12
Contact hours: 3 per week
Campus: Gardens Point
Teaching period: 2011 SEM-1

INB371 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:** INB270 or ITB003  
**Antirequisites:** ITB711, ITB702, INN371  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

**INB372 AGILE SOFTWARE DEVELOPMENT**  
This unit introduces you to the software development process. You will look at each of the major activities involved in developing a software system. You will also learn how to manage and control the software development process for a large project when a number of team members are involved in the development. This unit develops the professional practice of working on large software systems.

**Prerequisites:** INB370  
**Antirequisites:** INN372, ITB612, ITB712  
**Assumed knowledge:** Good programming, debugging, testing and software development skills.  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

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

**Prerequisites:** INB271 or ITB007  
**Antirequisites:** INN271, INN373  
**Equivalents:** ITB716 and ITN716  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

**INB381 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 and MAB281  
**Antirequisites:** ITB746  
**Equivalents:** MAB280  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-2

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

**Prerequisites:** INB371, INB381 and MAB281  
**Antirequisites:** ITB648 and ITB649  
**Equivalents:** ITB747  
**Credit points:** 12  
**Contact hours:** 3 per week  
**Campus:** Gardens Point  
**Teaching period:** 2011 SEM-1

**INN401 HONOURS DISSERTATION 1**  
Research is about contributing to scientific knowledge. You will be expected to make such a contribution in your honours dissertation, although the size of that contribution will probably be relatively small as this is likely to be your first research project. The principle aim, however, is to provide you with basic research skills that you will be able to apply again in the future in other contexts, be they in a higher research degree, or applied to real-world problems in an industry setting. You will learn the types of processes, creativity and analytical thinking that leads to such scientific advances and how to communicate such findings in a rigorous scientific manner.

**Credit points:** 12  
**Campus:** Gardens Point  
**Teaching**
INN402 HONOURS DISSERTATION 2
Research is about contributing to scientific knowledge. You will be expected to make such a contribution in your honours dissertation, although the size of that contribution will probably be relatively small as this is likely to be your first research project. The principle aim, however, is to provide you with basic research skills that you will be able to apply again in the future in other contexts, be they in a higher research degree, or applied to real-world problems in an industry setting. You will learn the types of processes, creativity and analytical thinking that leads to such scientific advances and how to communicate such findings in a rigorous scientific manner.

Credit points: 12  Campus: Gardens Point  Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

INN403 HONOURS DISSERTATION 3
Research is about contributing to scientific knowledge. You will be expected to make such a contribution in your honours dissertation, although the size of that contribution will probably be relatively small as this is likely to be your first research project. The principle aim, however, is to provide you with basic research skills that you will be able to apply again in the future in other contexts, be they in a higher research degree, or applied to real-world problems in an industry setting. You will learn the types of processes, creativity and analytical thinking that leads to such scientific advances and how to communicate such findings in a rigorous scientific manner.

Credit points: 12  Campus: Gardens Point  Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 SUM

INN404 HONOURS DISSERTATION 4
Research is about contributing to scientific knowledge. You will be expected to make such a contribution in your honours dissertation, although the size of that contribution will probably be relatively small as this is likely to be your first research project. The principle aim, however, is to provide you with basic research skills that you will be able to apply again in the future in other contexts, be they in a higher research degree, or applied to real-world problems in an industry setting. You will learn the types of processes, creativity and analytical thinking that leads to such scientific advances and how to communicate such findings in a rigorous scientific manner.

Credit points: 12  Campus: Gardens Point  Teaching period: 2011 SEM-1, 2011 SEM-2 and 2011 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.

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 Coordinator Approval and a course GPA of at least 5.5 is required to enrol.  
Credit points: 12  Campus: Gardens Point  Teaching period: 2011 SEM-1 and 2011 SEM-2

MAB281 MATHEMATICS FOR COMPUTER GRAPHICS
Computer graphics is a rapidly growing field of the computer science industry. It has applications in computer games, virtual reality, CAD systems and geometric modelling. Fundamental to all of these applications is mathematics. Thus, to be a working professional in this area you will need a working knowledge of the basic mathematics and concepts that are central to this field. This unit is also ideal for non-specialists as it demonstrates some of the various fields of applications of mathematics in everyday life. The aim of this unit is to introduce you to the mathematics of computer graphics and relate this to the solutions of problems that arise in the many applications of computer graphics.

Assumed knowledge: Grade of at least Sound Achievement in Senior Mathematics B (or equivalent) or MAB105 is assumed knowledge.  
Credit points: 12  Contact hours: 4 per week  Campus: Gardens Point  Teaching period: 2011 SEM-2

INN700 INTRODUCTION TO RESEARCH