

### ■ CP510 INTRODUCTION TO OPERATING SYSTEMS

CREDIT POINTS 15  
 OFFERED Semesters 1 and 2 (Day)  
 Semester 1 (Evening)  
 PREREQUISITES Students are expected to have a basic working computing skill set. Students should read the IT Student Handbook produced by the Information Services Branch, available from the university bookshop. This resource will not only allow prospective students to assess their skills but, if necessary, pursue a self-study program to raise their skills to an appropriate level.

This unit is intended to acquaint students with basic computer hardware organisation, operating systems, and the Internet. Students will be provided with an appropriate set of skills and knowledge for use in their subsequent computing studies. The student is introduced to the basic features and uses of operating systems, to the properties of a typical graphical user interface (GUI), to basic uses of the Internet, and to the UNIX operating system. Common hardware configurations will also be discussed.

### ■ CP514 PROGRAMMING 1

CREDIT POINTS 15  
 OFFERED Semesters 1 & 2 (day)  
 Semester 1 (evening)  
 COREQUISITE CP510 or equivalent  
 EXCLUSION CP583  
 This unit provides a first course in a sequence of units in object-oriented programming. The object-oriented programming paradigm will be introduced and used in the development of application software. Object-oriented design techniques will be used.

### ■ CP515 SOFTWARE ENGINEERING: PROCESSES AND METHODS<sup>#</sup>

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 COREQUISITE CP514 or equivalent  
 EXCLUSION CP613  
 This unit explores significant concepts in the development of software systems. Methodologies considered are functional, relational and object-oriented. Emphasis is placed on project management, requirements analysis, cost estimation, software design, testing and quality assurance and standards.

<sup>#</sup> Subject to Approval

### ■ CP571 BUSINESS INFORMATION SYSTEMS

CREDIT POINTS 15  
 OFFERED Semester 1  
 This unit provides an introduction to business information systems and explores spreadsheet skills in depth. It should thus provide significant support, in particular, for students studying accounting. It looks at the requirements of a practising professional to use sophisticated technology to model and solve business problems based on decision support software.

### ■ CP582 NETWORK PROTOCOLS & SERVICES

CREDIT POINTS 15  
 OFFERED Semester 1  
 PREREQUISITE CP685  
 This unit provides students with a conceptual understanding of local and wide area computer networks. It also requires students to use a range of applications and utilities that demonstrate the use of the services provided by networks.

### ■ CP586 MULTIMEDIA COMMUNICATION

CREDIT POINTS 15  
 OFFERED Semester 1 and 2 (day)  
 PREREQUISITES Students are expected to have a basic working computing skill set. A list of the required skills will be published from time to time in the relevant course handbooks together with a list of resources, which might be used to enhance the student's skills. This list will not only allow prospective students to assess their skills but if necessary, pursue a self-study program to raise their skills to an appropriate level.

This unit is designed to develop students abilities to communicate effectively using appropriate technology and to solve problems related to information and communication technology, whilst providing an overview of the field of Interactive Multimedia as implemented via CD ROM or Internet technologies.

### ■ CP600 PROFESSIONAL EXPERIENCE

CREDIT POINTS 15  
 OFFERED Semesters 1 & 2; minimum 150 hrs of approved work experience.  
 PREREQUISITES Sufficient progress throughout the course as determined by the Course Coordinator.

EXCLUSION CP601  
 This unit is designed to provide students with the opportunity to put into practice the theory taught in the course through undertaking computer-related work experience during vacation periods and/or normal semesters.

### ■ CP601 INFORMATION SERVICES EXPERIENCE

CREDIT POINTS 15  
 OFFERED Semesters 1 & 2; minimum 150 hrs of approved work experience.  
 PREREQUISITE Sufficient progress throughout the course as determined by the Course Coordinator.

EXCLUSION CP600  
 This unit allows students to gain credit for work experience gained prior to graduation. The work undertaken will generally be part time and will amount to a minimum of 150 hours work on the Internet help desk at the IBM Southern Region Data Centre or at a similar facility at another institution.

### ■ CP602 INDUSTRY AWARENESS

CREDIT POINTS 15  
 OFFERED Semester 1  
 PREREQUISITE Completion of the first year of the BIT (Professional Practice) course.

This unit forms part of the Bachelor of Information Technology (Professional Practice). It is studied in conjunction with industry experience. Students will experience company orientation procedures, and learn about business commitments, time and performance management. They will participate in a case study of a software development project to gain an understanding of project management and client requirements.

### ■ CP603 INDUSTRY APPLICATIONS

CREDIT POINTS 15  
 OFFERED Semester 2  
 PREREQUISITE Completion of the first year of the BIT (Professional Practice) course.

This unit forms part of the Bachelor of Information Technology (Professional Practice). It is studied in conjunction with industry experience. Students will implement a testing plan for the verification and validation of a software application, including the test planning, preparation, execution, recording of results and faults, summation and presentation of outcomes

### ■ CP611 DATABASE MANAGEMENT SYSTEMS

CREDIT POINTS 15  
 OFFERED Semester 1 (day)  
 Semester 2 (day, evening)  
 PREREQUISITE CP510 or equivalent

This unit introduces students to the capabilities and advantages of database management systems. It involves learning the general features of such software and using an actual system for a practical application.

### ■ CP616 SOFTWARE ENGINEERING: ANALYSIS AND DESIGN<sup>#</sup>

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE CP514  
 EXCLUSION CP622

This unit studies the tools and techniques used in the analysis and design of complex computer systems. Particular emphasis is given to the outcome of the early stages of software development including: the software requirements and specifications documentation, and software design document.

<sup>#</sup> Subject to Approval

### ■ CP621 DATABASE DESIGN

CREDIT POINTS 15  
 OFFERED Semester 1 (Elective unit please check availability)  
 PREREQUISITE CP611 or equivalent

This unit is intended to enable the student to design a relational database from a problem description and then implement their design. Students will be provided with the skills and knowledge of the way in which Database Systems are designed and implemented. They will gain the ability to design a solution to particular information problems and the skills to implement this solution in a database management software tool.

### ■ CP627 PROGRAMMING 2

CREDIT POINTS 15  
 OFFERED Semester 2 (day, evening)  
 PREREQUISITE CP514  
 EXCLUSION CP686, CP527

This unit is the second in a sequence of object-oriented programming units. It involves further study of object-oriented programming principles and extends the knowledge of object-oriented classes. Linked lists, stacks, queues and trees will be investigated. Searching and sorting methods will be studied. Concepts of windows programming will be introduced.

### ■ CP641 INTERNET DESIGN

CREDIT POINTS 15  
 OFFERED Semester 1 and 2 (Elective unit please check availability)  
 PREREQUISITE CP510 or equivalent

This unit focuses on the WWW as a key technological platform, its essential features, tools and languages such as HTML, the design techniques required for good web site design, and the evaluation of emerging information services. Students will develop a complex web site from scratch, using information gathering and flow charting techniques, have an understanding of Web site security and firewalls, and be proficient in the use of a Web authoring tool.

### ■ CP681 COLLABORATIVE COMPUTING

CREDIT POINTS 15  
 OFFERED Semester 2  
 PREREQUISITE CP510 or equivalent

This unit provides students with an understanding of environments to support the creation and sharing of information.

### ■ CP682 GROUPWARE AND DOCUMENT MANAGEMENT

CREDIT POINTS 15  
 OFFERED Semester 1  
 PREREQUISITE CP681

This unit provides an understanding of the concepts underlying groupware and document management. The development of groupware applications for organisations is a particular focus.

### ■ CP684 HUMAN FACTORS IN INFORMATION SYSTEMS

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)  
 PREREQUISITE CP510 or equivalent

The unit will enable students to appreciate the importance of human factors in information systems. It covers topics such as psychological factors in human computer interaction, cognition, memory and knowledge representation, interface design, ergonomics, and task analysis and modelling.

#### ■ CP685 NETWORK OPERATING SYSTEMS

CREDIT POINTS 15  
OFFERED Semester 1 and 2  
PREREQUISITE CP510

This unit will give students an understanding of the security models provided by the major operating systems involved in modern computer networks. Students of this unit will gain a critical understanding of how the two main models differ, and are similar, in their approach to controlling access to resources. This unit will enable students to play an intelligent role in the selection, design and implementation of secure network installations.

#### ■ CP687 WORLD WIDE WEB TECHNOLOGY 1

CREDIT POINTS 15  
OFFERED Semester 1 (day)  
PREREQUISITES CP510 or equivalent

The Web is probably the most significant development in IT over the last two decades. This unit provides an introduction to Web Technologies, particularly HTML, client side scripting and processing.

#### ■ CP688 WORLD WIDE WEB TECHNOLOGY 2

CREDIT POINTS 15  
OFFERED Semester 2 (day)  
PREREQUISITE CP687 or equivalent

The Web is probably the most significant development in IT over the last two decades. This unit encompasses core Web Technologies particularly concerned with server side mechanisms and XML.

#### ■ CP703 SYSTEMS PROGRAMMING

CREDIT POINTS 15  
OFFERED Semester 2  
PREREQUISITES CP510, CP728 or equivalent

This unit introduces students to programming at the operating system level in UNIX, DOS and Windows environments. Particular use is made of C and Visual Basic to interface to the operating systems.

#### ■ CP704 PROFESSIONAL DEVELOPMENT

CREDIT POINTS 15  
OFFERED Semesters 1 and 2  
PREREQUISITE Two years of University education.

This unit focuses on project management principles including ethical and social issues. Topics include ; Project Management Context and Processes; Integration; Time Management; Cost; Quality; Human Resources; Communications; Risk; Procurement; Intellectual Property; Computer Crime; and Professional Ethics and Responsibilities.

#### ■ CP710 PROJECT 1

CREDIT POINTS 15  
OFFERED Semesters 1 or 2  
PREREQUISITES All computing units of Yrs 1 & 2.  
First part of student project. Students will do a project relevant to the units studied in the course. Major emphasis in this first unit will be on requirements analysis and system design.

#### ■ CP711 PROJECT 2

CREDIT POINTS 30  
OFFERED Semester 1 or 2  
PREREQUISITE CP710 or approval of Course Coordinator.

Second part of student project. In this unit students will document and implement the design developed in the first project unit. This unit also includes a seminar component.

#### ■ CP726 WINDOWS PROGRAMMING

CREDIT POINTS 15  
OFFERED Semester 1 or 2 (Elective unit please check availability)  
PREREQUISITE CP514 or equivalent

This unit enhances student skills in the concepts of and techniques involved in developing Windows applications. An object-oriented approach reinforcing the prerequisite object-oriented programming unit will be used wherever possible as the development environment allows.

#### ■ CP728 ADVANCED PROGRAMMING

CREDIT POINTS 15  
OFFERED Semester 1  
PREREQUISITE CP514

This unit provides a course in computer programming using the C programming language assuming some experience with a programming language.

#### ■ CP729 COMMERCIAL PROGRAMMING

CREDIT POINTS 15  
OFFERED Semester 1 or 2 (Elective unit please check availability)  
PREREQUISITE CP613

This unit introduces students to commercial programming using the structured design skills from the prerequisite subjects applying them to a common business language. The language presently chosen is COBOL. The emphasis is on the practical generation of application programs to meet specifications supplied.

#### ■ CP742 KNOWLEDGE-BASED SYSTEMS

CREDIT POINTS 15  
OFFERED Semester 2 (Elective unit please check availability)  
PREREQUISITE CP510 or equivalent

This unit aims to provide students with the knowledge and skills to be able to structure the logic of a solution to a business or management problem, design a knowledge base containing a series of rules and implement a solution using knowledge-based software. Methods of problem solving, reasoning, knowledge representation and knowledge acquisition give the context within which these skills are developed.

#### ■ CP743 ARTIFICIAL INTELLIGENCE

CREDIT POINTS 15  
OFFERED Semester 1 (Elective unit please check availability)  
PREREQUISITES CP510 or equivalent

This unit provides an introduction to the area of study known as artificial intelligence and its relationship to other disciplines. It gives an overview of the major fields of endeavour with an emphasis on knowledge representation, automated reasoning, problem solving and machine learning.

**■ CP744 GRAPHICS**

CREDIT POINTS 15

OFFERED Semester 1 or 2 (Elective unit please check availability)

PREREQUISITES CP728, CP703

This unit introduces students to fundamental concepts and algorithms in the field of computer graphics, and provides them with an opportunity to gain further specialist programming experience. Students will be able to generate 2D and 3D graphical objects with realistic effects. Unit content includes geometric transformations, projections, viewing transformations, colour, hidden line surface removal, curves, surfaces, shading, texture and simple animation. C programming language and OpenGL graphics library will be used for implementation.

**■ CP746 INTERACTIVE INSTRUCTIONAL DESIGN**

CREDIT POINTS 15

OFFERED Semester 1 (Elective unit please check availability)

PREREQUISITE CP510 or equivalent

EXCLUSION CP847

This unit is designed to develop in the student an understanding of human behaviour and cognitive processes and to focus on the theories and approaches to instructional design which form the basis of the development of interactive instructional software. Students will critically evaluate commercial examples of computer based instruction, and will use an authoring tool to produce an interactive instructional model.

**■ CP751 INTERACTIVE MULTIMEDIA**

CREDIT POINTS 15

OFFERED Semester 2

PREREQUISITE CP510 or CP586 or appropriate prior experience.

This unit is designed to introduce students to the design, production and evaluation of multimedia, the array of technologies involved in such applications and the range and use of such media in education, training, entertainment, presentation and communications. Students will work in teams to produce a substantial interactive multimedia application.

**■ CP752 INTERNET COURSEWARE**

CREDIT POINTS 15

OFFERED Semester 2 (Elective unit please check availability)

PREREQUISITES CP746 or CP510 and relevant work experience.

This unit is concerned with the delivery of instructional and training packages over a computer network. It combines aspects of instructional theories applicable to distance education with the technological knowledge necessary for implementation.

**■ CP753 ADVANCED NETWORK SERVICES**

CREDIT POINTS 15

OFFERED Semester 2 (Elective unit please check availability)

PREREQUISITE CP582

The computing needs of modern organisations dictate that users have access to a combination of Internet (global) and Intranet (local) services. These are provided through Network Operating Systems which in turn rest heavily upon a growing set of Network Services. These services are usually built upon, or are enhancements of, standard Internet facilities. Students in this unit will learn to install, configure and interoperate a variety of services on one, or more, operating system platforms. The goal will be to understand the interactions that lead to a mature connectivity within an organisation.

**■ CP754 NETWORK OPERATING SYSTEM INTERNALS**

CREDIT POINTS 15

OFFERED Semester 1 (Elective unit please check availability)

PREREQUISITE CP582

The effective deployment, and ongoing functioning, of a Network Operating System requires an understanding of what is happening beneath the surface in the Operating System. This unit leads students into specific aspects of operating system design and relates them to the practice of one or more current Network Operating Systems. Issues such as memory management, process control, file system design and a layered service architecture will be studied. Particular attention will be paid to the way in which a layered architecture underpins the interoperation of distinctive protocols and platforms.

**■ CP755 ADVANCED NETWORK OPERATING SYSTEMS INTEGRATION**

CREDIT POINTS 15

OFFERED Semester 1 or 2 (Elective unit please check availability)

PREREQUISITES CP753, CP754

This Unit challenges the student to combine a variety of network operating systems implementations into an integrated system. By studying the abilities of systems such as Linux, Windows 2000 and Novell Netware to interoperate the student will gain a greater insight into networking as a whole and into the particular systems investigated.

**■ CP756 NETWORK API PROGRAMMING**

CREDIT POINTS 15

OFFERED Semester 1 or 2 (Elective unit please check availability)

PREREQUISITES CP582, CP514

This Unit connects the student's understanding of network operating systems with their programming skills and techniques. Every network operating system provides an Application Programming Interface (API) that enables programs to be written, in a variety of languages, that exploit and extend features of the operating system. Students will learn to write programs that make use of one or more API's.

#### ■ CP771 GUIDED STUDY

CREDIT POINTS 15  
 OFFERED Semesters 1 & 2  
 PREREQUISITE Agreement of the Course Coordinator.

This unit is specifically available to cater for students who go on exchange programs to other institutions. The intention is that an approved unit, which does not have an equivalent existing unit in the students' course, can be credited towards the students' degree. Specific objectives will depend on the topic studied.

#### ■ CP772 SPECIAL TOPICS IN COMPUTING

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)  
 PREREQUISITE Agreement of the Course Coordinator.

The principal objective of this unit is to enable students to study an area which is not in the usual units offered in the course. The unit will generally be taught by associate staff or visiting lecturers. Specific objectives will depend on the topic and staffing. The unit will be offered only when the staff is available and there is an established high level of interest from sufficient students.

#### ■ CP781 DISTRIBUTED SYSTEMS 1

CREDIT POINTS 15  
 OFFERED Semester 1  
 PREREQUISITE CP685 or equivalent

This unit presents the principles and practical aspects of designing distributed systems. New object-based models for distributed processing will be introduced. Applications of distributed processing in multimedia retrieval systems and mobile computing will be considered.

#### ■ CP782 CURRENT DEVELOPMENT WORKSHOP

CREDIT POINTS 15  
 OFFERED Semester 2  
 PREREQUISITES All core units of Yrs 1 & 2.

In this unit students will be exposed to recent developments in cooperative multimedia and distributed computing systems. This unit will also consider applications of these systems.

#### ■ CP783 PROJECT 1

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITES All core units of Yrs 1 & 2.

This is the first of a possible sequence of two project units. In most cases this first unit will concentrate on the requirements specification and the design stages of the project. Students may elect to continue their project work by enrolling in a further project unit.

#### ■ CP784 PROJECT 2

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE Satisfactory progress in CP783.

This is the second of two project units which students may complete. In this unit, students will document and implement the design developed in the first project unit.

#### ■ CP785 IT MANAGEMENT

CREDIT POINTS 15  
 OFFERED Semester 1 and 2  
 PREREQUISITES Substantial progress in the course.

This unit introduces students to ways in which Information Technology forms part of a business environment. The emphasis is on how IT relates to the strategic and organisational elements of the business and on how it should be managed and integrated in order to maximise its value to the firm and its stakeholders.

#### ■ CP786 ELECTRONIC BUSINESS SYSTEMS

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)

PREREQUISITES CP527 and CP611 or equivalent  
 In this unit students will be exposed to recent developments in the design and development of electronic business systems. Students will work individually and in teams to produce a substantial electronic business system.

#### ■ CP787 ELECTRONIC COMMERCE 1

CREDIT POINTS 15  
 OFFERED Semester 1 (Elective unit please check availability)

PREREQUISITES Nil  
 Electronic commerce encompasses an organization's use of the Internet for national and global business communications, inter and intra-company document management, the conduct of supply and customer transactions via electronic data interchange and the support of collaborative work groups to increase business efficiency and productivity.

#### ■ CP788 ELECTRONIC COMMERCE 2

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)  
 PREREQUISITES CP787

This is the second unit in a possible sequence of two units Electronic Commerce. Content includes Electronic Data Interchange technology, protocols and standards, management and distribution of electronic communications, on-line electronic payment systems.

#### ■ CP789 MULTIMEDIA DATABASE SYSTEMS

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)

PREREQUISITE CP611  
 This unit presents database transaction models for high-performance advanced applications. It also considers the design of query manipulation schemes for non-textual content-based multimedia and image retrieval systems. Applications of object-oriented database systems and the transactional paradigm for knowledge systems and cooperative multi-agent systems are also considered.

### ■ CP790 DISTRIBUTED SYSTEMS 2

CREDIT POINTS 15  
 OFFERED Semester 2 (Elective unit please check availability)  
 PREREQUISITE CP781

This unit presents the principles and practical aspects of designing net-centric systems. New high-performance net-centric models will be introduced. Recent developments in advanced distributed cooperative multimedia systems, mobile computing systems, multi-agent systems and image processing systems will be discussed.

### ■ CP800 PROJECT<sup>#</sup>

CREDIT POINTS 15  
 OFFERED Semesters 1 & 2  
 PREREQUISITES At least 3 semesters of Master's level units

The project unit will give the student experience in the development of a component for an information technology system. This unit includes a requirements analysis and systems design, as well as the actual documentation and implementation of an information technology system.

<sup>#</sup> *Subject to Approval*

### ■ CP802 RESEARCH PROJECT 1

CREDIT POINTS 20  
 OFFERED Semester 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit is designed as an introduction to research for students doing postgraduate work. This unit introduces the skills necessary for starting research-related activities. The emphasis will be on guided information gathering, organisation and assimilation using library resources and the Internet. Students should select a suitable topic and supervisor and draw up a project plan in which the major milestones of their thesis work are set out.

### ■ CP803 MINOR THESIS 1

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This is the first of the two minor thesis units. Students are expected to follow a similar sequence of steps to those adopted in their research project. They should select a suitable topic and supervisor and draw up a project plan in which the major milestones of their thesis work are set out.

### ■ CP804 MINOR THESIS 2

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit is the second of the two Minor Thesis units. For further details see the description of CP803.

### ■ CP805 ADVANCED COMPUTING

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit will be given by associate staff or specialist visiting lecturers. The content and objectives will be dependent on the lecturer and the topic chosen. Topics will vary from year to year, reflecting the changes in the area and the special interests of lecturing staff.

### ■ CP806 SPECIAL TOPICS IN COMPUTING

CREDIT POINTS 20  
 OFFERED Summer (Block)  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit may be given by specialist visiting lecturers. The content and objectives will be dependent on the lecturer and topic chosen. The topics will vary from year to year, reflecting the changes in the area and the special interests of the lecturing staff. Topics may include: Advanced Algorithms, Machine Learning, Information Retrieval, Internet Computing, Data Mining, Computer Supported Collaborative Work, Networks and Distributed Computing, Object Oriented Design, Advanced Software Engineering, Advanced Graphics, Image Processing.

### ■ CP807 STUDIES IN COMPUTING

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit is designed to enable students to undertake studies in an approved combination of units offered in other courses by this School. The content will be agreed upon by consultation between the student and course coordinator. Generally the unit will be used in order to provide the student with the opportunity to study specific topics which have not been part of the student's previous study.

### ■ CP808 ADVANCED SOFTWARE ENGINEERING<sup>#</sup>

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE CP515

This unit explores the Object Oriented methodologies, tools and techniques used in modelling and design of information systems, particularly the use of the Universal Modelling Language in the transition from object oriented design to its implementation in a relational data base management system.

<sup>#</sup> *Subject to Approval*

### ■ CP810 ADVANCED TOPICS IN DATABASE

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit looks at a variety of systems for storing complex data. The emphasis is on database management systems and information retrieval systems which have evolved in recent years.

### ■ CP812 DATA SECURITY

CREDIT POINTS 20  
 OFFERED Semester 1 or 2  
 PREREQUISITES Completion of core requirements of undergraduate degree.

This unit introduces the main ideas of data security. On completion of this unit students should be able to explain the hierarchy of computer security classifications and the requirement of each level; they should be able to assess the risks to a given system, and to devise and implement an appropriate security plan for a given small system.

#### ■ CP813 OBJECT ORIENTED DATABASES

CREDIT POINTS 20  
OFFERED Semester 1 or 2  
PREREQUISITES Completion of core requirements of undergraduate degree.

On completion of this unit students should be able to discuss the requirements of an object oriented Data Base Management System (DBMS), explain methods of implementing such a DBMS, choose when to use an object oriented DBMS, and design an object oriented database.

#### ■ CP814 INDUSTRIAL EXPERIENCE

CREDIT POINTS 20  
OFFERED Semester 1 or 2  
PREREQUISITES Completion of core requirements of undergraduate degree.

This unit involves working on a project in some external organisation. The work is to be computer related and carried out under supervision. The nature and content of the work undertaken must be discussed between the student and the Course Coordinator. Generally this unit provides the student with the opportunity to put into practice skills developed in other units of the course.

#### ■ CP815 GUIDED STUDY UNIT

CREDIT POINTS 20  
OFFERED Semester 1 or 2  
PREREQUISITES Completion of core requirements of undergraduate degree.

This unit exists to allow students to pursue a particular area of interest which is not offered in other units in the course. The students and a nominated supervisor will devise a suitable program of study at the outset of the unit. This program requires the approval of the Course Coordinator.

#### ■ CP821 ADVANCED PROGRAMMING

CREDIT POINTS 20  
OFFERED Semester 1 or 2  
PREREQUISITES Completion of core requirements of undergraduate degree.

This unit is designed to enhance software engineering skills for rapid development of applications which can be ported to multiple platforms and run efficiently on networks. The advantages of Object Oriented programming development will be explored with emphasis on reuse of code, performance, functionality and ease of maintenance. Students will be expected to familiarise themselves with current analysis and design trends through reading a wide range of journals.

#### ■ CP828 ADVANCED PROGRAMMING #

CREDIT POINTS 15  
OFFERED Semester 1 or 2  
PREREQUISITE CP527

This unit will provide students with the necessary skills required to architect and develop complex computer systems. The development of systems which run in a networked computer environment is a particular focus of the unit.

# Subject to Approval

#### ■ CP829 IT PROJECT MANAGEMENT#

CREDIT POINTS 15  
OFFERED Semester 1 or 2  
PREREQUISITES Nil

This unit develops appropriate project management principles and techniques from the inception of an IT project, through its monitoring via project management tools to its conclusion and review. Project plans, risk analysis and team performance are applied to a practical application.

# Subject to Approval

#### ■ CP833 DATA MINING

CREDIT POINTS 15  
OFFERED Semester 1 or 2  
PREREQUISITES Nil

This unit is intended to acquaint students with algorithms, techniques and software associated with the selection, pre-processing, transformation and data mining phases of the discovery of knowledge from databases (KDD) process. Students are introduced to data mining techniques that derive from machine learning, statistics and mathematics in addition to data warehousing concepts.

#### ■ CP834 INFORMATION SECURITY, PRIVACY AND ACCESS

CREDIT POINTS 15  
OFFERED Semester 1 or 2  
PREREQUISITES Nil

This unit introduces students to aspects of information security, and to provide students with the necessary background and knowledge to identify risk and develop appropriate countermeasures.

#### ■ CP835 INTELLIGENT SYSTEMS FOR AN INFORMATION SOCIETY

CREDIT POINTS 15  
OFFERED Semester 1 or 2  
PREREQUISITES Nil

This unit examines intelligent information systems in the context of the social, economic and legal changes associated with the emerging information society.

#### ■ CP836 RESEARCH SKILLS AND ACADEMIC COMMUNICATION

CREDIT POINTS 15  
OFFERED Semester 1  
PREREQUISITE General entry to the Honours program.

This unit introduces the skills necessary for starting research-related activities. The emphasis will be on guided information gathering, organisation and assimilation using library resources and the Internet. Information will be provided on the writing of papers, on preparation of projects and theses, and on giving seminars. Students will also be guided on use of the library and other information sources.

#### ■ CP837 RESEARCH PROJECT & THESIS

CREDIT POINTS 60  
OFFERED Semester 1&2  
PREREQUISITE General entry to the Honours program.

This unit is designed as an introduction to research for students doing postgraduate work. Students will produce a thesis describing their research activity. Students will also be required to present seminars on their work.

■ **CP840 ADVANCED TOPICS IN WEB TECHNOLOGY**

CREDIT POINTS 20  
 OFFERED Semester 1 (day)  
 PREREQUISITES CP510, CP527 or equivalent  
 The Web is probably the most significant development in IT over the last 2 decades. This unit encompasses core Web Technologies particularly concerned with server side mechanisms, XML and Java/ XML developments.

■ **CP841 ADVANCED TOPICS IN PROGRAMMING**

CREDIT POINTS 20  
 OFFERED Semester 2 (day)  
 PREREQUISITE CP527 or equivalent  
 The advent of Java application servers means that browser based applications can now offer secure e-business applications fully integrated with existing corporate legacy systems. This unit covers a number of Java technologies such as Java server pages, Java servlets, JAXP and Java database connectivity.

■ **CP842 SPECIAL TOPICS IN NETWORK SYSTEMS**

CREDIT POINTS 20  
 OFFERED Semester 1 (day)  
 PREREQUISITE Basic understanding of OSI models and network protocols.

Networks are the foundation of modern computing and IT systems. This unit builds on a basic understanding of networking technology to study and implement current networking technology developments.

■ **CP843 ADVANCED TOPICS IN SOFTWARE ENGINEERING**

CREDIT POINTS 20  
 OFFERED Semester 1 (day)  
 PREREQUISITE CP613 or equivalent  
 This unit focuses on analysing, designing, implementing and maintaining software systems, using an object-oriented approach. The emphasis is on using project planning methods to enable a small team to attempt a fully documented small business information system.

■ **CP844 SPECIAL TOPICS IN DATABASE SYSTEMS**

CREDIT POINTS 20  
 OFFERED Semester 2  
 PREREQUISITE CP611 or equivalent  
 This unit is concerned with advances in Database technology. It will examine some of the areas in the storage and retrieval of multimedia data, the convergence of traditional Relational and Object-oriented technologies, Document Databases, and Data Warehousing and Mining.

■ **CP845 PROFESSIONAL PROJECT SKILLS**

CREDIT POINTS 20  
 OFFERED Semester 1  
 PREREQUISITE Entry to the masters course  
 This unit will provide the skills necessary to undertake the analysis, design, implementation and technical documentation of a significant software application.

■ **CP846 PROJECT**

CREDIT POINTS 20  
 OFFERED Semester 1  
 PREREQUISITE Two Masters level units  
 The project unit will give the student experience in the development of a component for an IT system that would have application.

■ **CP847 ADVANCED INTERACTIVE INSTRUCTIONAL DESIGN**

CREDIT POINTS 20  
 OFFERED Semester 1 OR 2 (day)  
 PREREQUISITE CP510 or equivalent  
 EXCLUSION CP746  
 This unit is designed to develop in the student an understand of human behaviour and cognitive processes and to focus on the theories and approaches to instructional design which form the basis of the development of interactive instructional software. This unit will also examine the psychology of learning and classical and operant conditioning. Students will critically evaluate commercial examples of computer based instruction, and will use an authoring tool to produce an interactive instructional model.

■ **CP910 COLLABORATIVE COMPUTING FOR BUSINESS**

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE Nil  
 This unit provides students with an understanding of environments to support the creation and sharing of information. Major technological elements underlying the strategies and requirements of Computer Supported Cooperative Work are considered. Recent developments in areas such as computer conferencing systems, workflow systems and shared filing systems are discussed.

■ **CP911 DESIGNING GROUPWARE SYSTEMS**

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE CP910  
 This unit extends the understanding of environments to support the creation and sharing of information introduced in CP910 Collaborative Computing for Business. In particular, the concepts underlying groupware and document management will be presented. The theory will be reinforced by the development of groupware applications for relevant organisations.

■ **CP912 COLLABORATIVE COMPUTING PROJECT**

CREDIT POINTS 15  
 OFFERED Semester 1 or 2  
 PREREQUISITE CP911  
 This unit provides the student with opportunities to utilise and enhance their collaborative computing skills in a significant practical application. The application will be chosen in consultation with industry and will be a suitable example of Computer Supported Cooperative Work.80.

**■ CT510 INTRODUCTION TO COMPUTING**

CREDIT POINTS 15

OFFERED Semester 1 (Day)

PREREQUISITES Students are expected to have a basic working computing skill set. A list of the required skills will be published from time to time in the relevant course handbooks, together with a list of resources, which might be used to enhance the student's skills. This list will not only allow prospective students to assess their skills but if necessary, pursue a self-study program to raise their skills to an appropriate level.

This unit is intended to acquaint students with basic computer hardware organisation, operating systems, and the Internet. Students will be provided with an appropriate set of skills and knowledge to support their non-computing studies. The student is introduced to basic features and uses of operating systems, to the properties of a typical graphical user interface (GUI) to basic uses of the Internet, and to the UNIX operating system. Common hardware configurations will also be discussed.