DEAKIN UNIVERSITY AUSTRALIA

# INFORMATION TECHNOLOGY

## POSTGRADUATE

| MELBOURNE | GEELONG | WARRNAMBOOL | OFF CAMPUS **2012**


# INFORMATION TECHNOLOGY

# Welcome

Professor Wanlei Zhou.

Our vision is to benefit society by training tomorrow's technology leaders and engineering a technology-driven future, via our cutting-edge research, collaborations with industry, and innovative teaching programs. In this way we help Deakin University to achieve its vision of being Australia's most progressive university. Deakin is already Australia's fastest growing research university, and the School of Information Technology has contributed enormously to this impressive research growth.

The School of Information Technology offers a suite of postgraduate courses covering a broad spectrum including Network Computing, Software Development, IT Security and IT Services. Our Master of Information Technology course builds on a solid foundation and offers cutting-edge professional knowledge and skills. The School prides itself on the relevance of its degrees to industry, and its responsiveness to the rapidly changing demands of the employers in the IT industries. We have strong relationships with industry, providing opportunities for students to gain industry experience as part of the Master of Information Technology (Professional) course.

In addition, an advisory board, consisting of key industry leaders, works closely with the School to ensure the relevance of the curriculum and to help us define and develop the skills set that employers expect of top graduates.

The School is also firmly focused on the future needs of industry. We expect that the emerging importance of the info-bio-nano technology convergence and the adoption of the National Broadband Network will have a major impact on the information technology industries within the next ten years, so we are focused now on building our capabilities in this exciting intersection of cross-disciplinary fields.

We are constantly revising and updating our activities, and focused on continuous process improvement, in order to achieve our vision. It is certainly an exciting time to be part of the information technology field and we hope you accept our offer to join us in this exciting future.

**Professor Wanlei Zhou**
**Head of School,**
**School of Information Technology**

## Finding more information

| 2012 Postgraduate Course Guide | Postgraduate study area booklets | Visit our web site | Talk to us | Visit us |
|---|---|---|---|---|
| This guide provides a list of the postgraduate courses Deakin offers, detailed information about types of postgraduate study, how to apply, our campuses, and study options, such as part time and off campus (distance education). To request a copy phone 1300 DEGREE (1300 334 733) or download at **www.deakin.edu.au**. | Deakin has a range of postgraduate study area booklets.<br><br>These booklets provide more information about each course, including course structures, career opportunities and unit descriptions. | Visit our web site for more comprehensive information including details of new courses, campuses, facilities, fee and support services at **www.deakin.edu.au**.<br><br>To search for courses and view unit descriptions visit **www.deakin.edu.au/courses**. | If you require more information or would like to speak with a student adviser, call 1300 DEGREE (1300 334 733).<br><br>You can also contact us via email: enquire@deakin.edu.au. | There are numerous opportunities to talk face-to-face with Deakin staff at events such as Open Day and Postgraduate Information Nights. See the inside back cover of this guide for details. |

# Contents



## Using this booklet

This booklet provides you with detailed information about Deakin's postgraduate courses in Information Technology (for domestic students), including course overviews, course structures, career opportunities and detailed descriptions of individual units at the back of the booklet.

It is designed to be read in conjunction with the *2012 Postgraduate Course Guide*, which gives an overview of Deakin's postgraduate courses, detailed information about types of postgraduate study, how to apply, our campuses, student support services and study options such as part time and off campus (distance education).

Once you have chosen the course you want to study, applying to study at Deakin is easy. You can apply online, track the progress of your application and accept your offer at **www.deakin.edu.au/apply**.

Deakin University also produces course guides specifically for international students. To request a copy, phone Deakin International on +61 3 9627 4877.

# About postgraduate study

## What is postgraduate study?

Postgraduate courses are for students who have completed an undergraduate degree or for those with significant work experience. You can start postgraduate studies to advance your career or change direction to a completely new field. It can also give you the opportunity to pursue study in a discipline area of personal interest. In particular, it can allow you to extend your undergraduate studies through research degrees where you can pursue your own theories or ideas at a high conceptual level. You may undertake postgraduate study by coursework or research. The best option for you will depend on your reasons for studying.

## What are coursework programs?

A postgraduate coursework degree typically involves a series of units, with specific coursework and assessments. Our postgraduate coursework programs give you the opportunity to complete a graduate certificate (designed to enable you to develop skills in a specialised area not necessarily related to your undergraduate degree), graduate diploma (more specialised and generally vocationally-focused) or masters by coursework (intensive course in which the qualification is directly relevant to your career) in a structured learning format. We also offer a Doctor of Business Administration (DBA), which represents the highest level of educational achievement for professionals who want to develop research capability which may be directly applied to business practice. The program consists of both coursework and a major research project.

## What are research degrees?

A research degree involves completing an approved program of research under the guidance of one or more supervisors within a prescribed time period. Research degree programs encourage you to develop independent research skills and are for students who want to pursue their own theories and ideas at a high conceptual level. Deakin offers three types of research degrees – masters by research (usually involving some coursework and a thesis of not more than 50 000 words), Doctor of Philosophy (PhD) (usually involving some coursework and a thesis of not more than 100 000 words) and Doctor of Psychology (combining a research project, coursework and structured research tasks that are specifically related to professional practice and are often carried out in the workplace).

## What is Credit for Prior Learning?

Credit for Prior Learning is credit granted towards your Deakin course for relevant approved study, or work experience. There are two aspects to Credit for Prior Learning:

» credit may be transferred to your Deakin program from completed or partially completed studies you have undertaken at other accredited institutions; and
» credit may be granted on the basis of knowledge and skills acquired through uncredentialed learning.

## Benefits of postgraduate study

No matter what stage of your career you are at, postgraduate study can help you stand out in the marketplace and expand your networks. Research found the main benefits of postgraduate study are:

» increased income – on average, people with postgraduate qualifications earn as much as $18 000 more per year compared to those with only a bachelors degree (*Postgraduate Destinations 2007*, produced by Graduate Careers Australia)
» increased job satisfaction – a 2010 survey* found that students who completed Deakin postgraduate programs increased their job satisfaction by 93 per cent within 12 months
» career advancement – a 2010 survey* of Deakin graduates found that 42 per cent attained a more senior position within 12 months of completing their postgraduate studies.

* Research conducted by First Point Research and Consulting in 2010.

### Student support services

Deakin University offers a complete range of services and programs to support students throughout their studies.

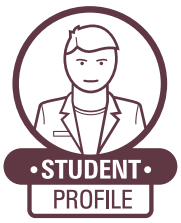
» **Study advice** – including time management, reading and note-taking, developing your academic English, avoiding plagiarism, critical thinking, writing essays and reports, class presentations and exam preparation.
» **Career development and employment** – including career guidance, job search assistance, and interview and resume skills training.
» **Counselling and personal support** – professional and experienced counsellors provide free, confidential counselling where personal concerns or stresses are affecting your studies.
» **Financial support** – including interest-free loans, grants, food vouchers and rental assistance.
» **Religious services** – including spiritual counselling, faith support services and worship and prayer spaces.
» **Medical centre** – medical and nursing healthcare and advice to students across all campuses, including GP consultations, vaccinations, tests and screenings and referrals to specialists.
» **Library** – access more than 1.47 million books, journals, newspapers, videos, CDs and DVDs across the campus libraries. Off-campus students located in Australia may have print material from any campus library sent to their nominated address free of charge. Many of the library's resources are also available online.
» **IT at Deakin** – all students can access 24-hour computer laboratories on each campus, and email and internet access for study purposes.
» **Disability services** – the Disability Resource Centre can provide students who have a health condition or a disability (long term or temporary) that affects access or ability to study, with alternative assessment arrangements, academic support workers, study materials in accessible formats and help with assistive technology.

For more information about postgraduate study at Deakin, please refer to the *2012 Postgraduate Course Guide* or visit **www.deakin.edu.au/postgrad**.

## Flexible delivery

Deakin's postgraduate courses are designed to be flexible so you can study when and where it suits you. You don't have to be a full-time, on-campus student to gain a postgraduate qualification at Deakin. We offer a range of study options and modes to choose from, including off-campus study.

Find out what will best suit you in the *Choose how you study* section on page 20, or get in touch using the contact details at the back of this booklet.




*Nishad Shah*
*Master of Information Technology (Professional), 2008*
*Melbourne Burwood Campus*
*Employed: IT Business Analyst, Coles Liquor Group*

Nishad Shah researched many universities world-wide before choosing to study at Deakin for a masters degree in information technology.

'I found that Deakin provided the best academic exposure with a great opportunity to work in corporate industry,' Nishad says.

'It is also IT-accredited at the highest level by the Australian Computer Society and Deakin's IT degree is well recognised internationally.'

Nishad is currently employed as an IT graduate in the head office of retail giant Coles in Melbourne. He is one of six IT graduates (from more than 6000 applicants) who were employed by the company for 2010 and will work as a graduate IT business analyst for the next two years.

It was an Industry-based Learning (IBL) opportunity in his last semester at Deakin that secured Nishad's employment pathway, he says.

*'I found that Deakin provided the best academic exposure with a great opportunity to work in corporate industry.'*

'Deakin gave me the opportunity to work in a six-month IBL placement with the SKILLED Group. After completing my IBL placement, I was confident enough to start applying for graduate positions. Now I am working for one of the largest Australian retailers in their graduate IT program.'

With a 'passion for computer networks and IT securities', Nishad says his Deakin studies gave him a solid foundation of knowledge from which to launch his career.

'Study at Deakin is very interactive and the lecturers are always open to questions,' he says.

'After studying and understanding these units in depth, I wanted to implement my knowledge in the real world. Deakin gave me the platform to do this with confidence.'

# About Information Technology

## Deakin's Master of Information Technology program

Deakin's postgraduate information technology courses provide a combination of leading-edge theory and technical knowledge plus hands-on practical experience to prepare you for a successful career as an IT professional in Australia and around the world.

Continual consultation with industry ensures the courses are relevant and up-to-date with workplace demand and that our program is designed to meet future industry requirements.

The program offers the flexibility to tailor your course to suit your own needs. You may choose to specialise in IT security, IT services, network computing, software development, in addition to obtaining a broad grounding in IT.

You will have access to specialist research and the opportunity to establish long-term contacts with the people who are shaping and influencing all levels of IT.

The option of flexible delivery enables you to balance work, family and study.

## Flexible exits

This program offers you the flexibility to respond to the demands of your career. If you enrol in the Master of Information Technology you can elect to exit from the program after completing 4 credit points and qualify for the Graduate Certificate of Information Technology. If you elect to exit after completion of 8 credit points you will qualify for the Graduate Diploma of Information Technology.

## Course content

Your course structure will depend upon your basis of entry into the course, and your preferred specialism.

If you enter the course with a non-computing undergraduate degree you will have to undertake four compulsory foundation units. Students must also complete two core project units and at least one specialism.

## Specialisms

### Network computing

Plan, install, provide and manage both local area networks and wide area networks with a strong focus on network design, routing protocols and switching concepts.

The specialism incorporates the CISCO CCNA curriculum which prepares you for the CCNA industry certification. There is a strong focus on application development for networked systems and supporting user mobility from both application and network perspectives.

### Software development

Gain theoretical and practical skills in current trends in the analysis, design and implementation of complex and large-scale software systems. Designed with input from industry leaders, there is a strong focus on the development of high quality software using methodologies, tools, techniques and management principles relevant to industry. There is emphasis on the development of web-based and distributed applications and the use and development of open source software.

### IT security

Develop skills in securing data, communications and infrastructure as well as investigating, analysing and providing solutions to computer crime. You'll also gain an understanding of problem solving, communication and technical capabilities related to information technology security and the legal, regulatory and ethical contexts in which these skills are used. The security units give you a solid foundation in areas including information security, internet and network security, access controls and firewalls. Along with your work experience, the units prepare you towards obtaining certification as a Certified Information Systems Security Professional on completion of the CISSP exam administered by The International Information Systems Security Certification Consortium (ISC)2 (**www.isc2.org**).

### IT services

This specialism was designed in partnership with IBM, to develop specialised information technology skills by providing up-to-date knowledge of recent developments in computing technology and practical IT consulting skills. Learn about cutting edge work in computer science, operations research, business strategy, management sciences, social and cognitive sciences and the legal sciences to develop the skills needed in a services-led economy.

## Professional recognition

The Master of Information Technology program is accredited at the professional level with the Australian Computer Society (ACS). The program has been externally assessed for quality and content by the ACS, ensuring it meets the highest standard of the profession and industry.

## Deakin's Master of Networking and Security program

The Master of Networking and Security is a specialist degree that builds on undergraduate study in information technology. It meets the demands of current undergraduate students who wish to further their studies by undertaking a specialist postgraduate course. As part of the course you have the opportunity to gain industry certifications in both the networking (Cisco Certified Network Associate (CCNA)) and security fields (Certified Information Systems Security Professional (CISSP)), in conjunction with relevant work experience. The course also provides you with advanced knowledge in the emerging security field of digital forensics. These features of the course provide you with a unique learning opportunity that balances both in-depth theory as well as practical hands-on skills.

Many of Deakin's library resources are available online.

## Careers

Deakin's postgraduate IT courses have been designed by professionals for professionals seeking to advance their careers in the highly competitive IT industry.

Industry representatives from leading IT firms, state government departments and highly respected industry organisations contribute to course development, to ensure that our courses are tailored to produce graduate skills that industry employers value.

You will graduate with a broad knowledge and understanding of general issues, concepts and practices in information technology and a sound knowledge and understanding of the technological aspects of IT. The course allows you to develop a raft of generic skills, in addition to strong IT skills, enabling you to pursue a challenging career as an IT professional within a wide range of industries.

Career opportunities may include:

» business analyst
» network administrator
» database administrator
» security analyst
» solutions architect
» technology consultant
» software developer
» security systems manager.

## Industry focus

Deakin's postgraduate IT program reflects industry needs, offering areas of study that are of crucial importance to IT development and applications.

You'll experience guest lectures and project-based activities involving leading IT professionals from a range of industries.

Our partnerships with industry provide opportunities to gain hands on experience working on industry projects.

## CISCO accreditation

Deakin University, as an official CISCO local academy, enables you to prepare for the CISCO CCNA (Cisco Certified Network Associate) Industry certification by completing two specific units as part of your postgraduate study.

This accreditation is highly valued by employers and the opportunity to gain CISCO accreditation while qualifying for a postgraduate course in IT allows you to make tremendous savings in both time and money.

## Industry work placements

Courses offering work experience in industry and work integrated learning are highly sought after by employers and students alike as they play a critical role in the development of employability skills and job-readiness of graduates.

If you are selected for Deakin's Science and Technology Industry-based Learning (IBL) program you will be able to work in industry in a role related to your area of study as part of your course. The IBL placements also come with an industry funded scholarship.

Master of IT (Professional) students may undertake a trimester (three–six months) of industry based learning or a trimester of research under the supervision of Deakin researchers.

If you undertake research as part of the Master of IT (Professional), you will satisfy the entry requirements and be able to pursue a pathway into a research degree. You will have the opportunity to attend research seminars to broaden your knowledge in IT and experience first hand the cutting edge IT research happening at Deakin and in the wider research community.

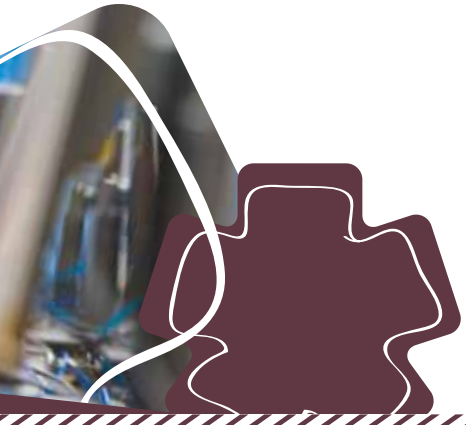

*Belinda Willis, National Recruitment Manager, Coles and Heidi Vestergaard, Emerging Talent Manager, Coles.*

'Coles, a division of Wesfarmers, is one of Australia's largest companies and a leading retail organisation of several successful brands.

We employ IT graduates on a two-year program that consists of four six-month rotations supporting development in a variety of IT disciplines. Throughout this two-year program, graduates learn about many IT roles and have the opportunity to become part of the team and work in areas including, but not limited to, system administration, application support and maintenance, IT project coordination, technical analysis and functional analysis.

Our program also provides graduates the opportunity to work on at least one business project, enhancing their skills and providing opportunities to build professional networks within the organisation.

Our ideal IT graduates bring a love of retail business and are ambitious, customer focused and dedicated, with an instinctive appreciation for IT as part of overall business. We also look for people who will become great ambassadors for the brand as an employer of choice for graduates and university alumni.'



# Information Technology postgraduate coursework degrees

| Course name | Course code | Years full time | Campus | Trimester intake options[2] | Indicative 2011 annual fee FT[1] | Page |
|---|---|---|---|---|---|---|
| Graduate Certificate of Information Technology | S578 | 0.5 | B X | T1, T2 | $9975 | 8 |
| Graduate Diploma of Information Technology | S678 | 1 | B X | T1, T2 | $19 950 | 8 |
| Master of Information Technology | S778 | 1.5 | B X | T1, T2 | $19 960 | 9 |
| Master of Information Technology (Professional) | S779 | 2 | B X | T1, T2 | $19 950 | 10 |
| Master of Networking and Security | S781 | 1.5 | B | T1, T2 | $19 950 | 10 |
| Master of Information Security | M781 | 1 | B X | T1, T3 | $20 570 | 11 |
| Graduate Certificate of Information Systems | M522 | 0.5 (FT T2 only) | B X | T1, T2, T3 | $9975 | 11 |
| Graduate Diploma of Information Systems | M622 | 1 | B X | T1, T2, T3 | $19 950 | 12 |
| Master of Information Systems | M722 | 1.5 | B X | T1, T2, T3 | $19 940 | 12 |
| **Combined courses** | | | | | | |
| Master of Information Technology/ Master of Business Administration (International) | D754 | 2 | B X | T1, T2 | $20 370 | 14 |
| Master of Information Technology/Master of Commerce | D750 | 2 | B X | T1, T2 | $20 110 | 14 |
| Master of Information Technology/ Master of Information Systems | D751 | 2 | B X | T1, T2 | $19 950 | 15 |

Information correct at June 2011, Deakin University reserves the right to alter, amend or delete course offerings and other information listed.

1 Fees quoted are for Australian domestic students and should be used as a guide only. Fees are based on a typical enrolment in one year of full-time study. All fees quoted are for Fee-Paying Places, unless indicated CSP (Commonwealth Supported Place). Actual tuition fee charged may depend on the units studied and are subject to change. Masters program students please note: where the length of the masters program is 12 units or 1.5 years of full-time study equivalent, the indicative fee may not be a full fee for the course. For more fee information, including information about the FEE-HELP loan program and how you can defer your payments, see page 22 or visit www.deakin.edu.au/fees.

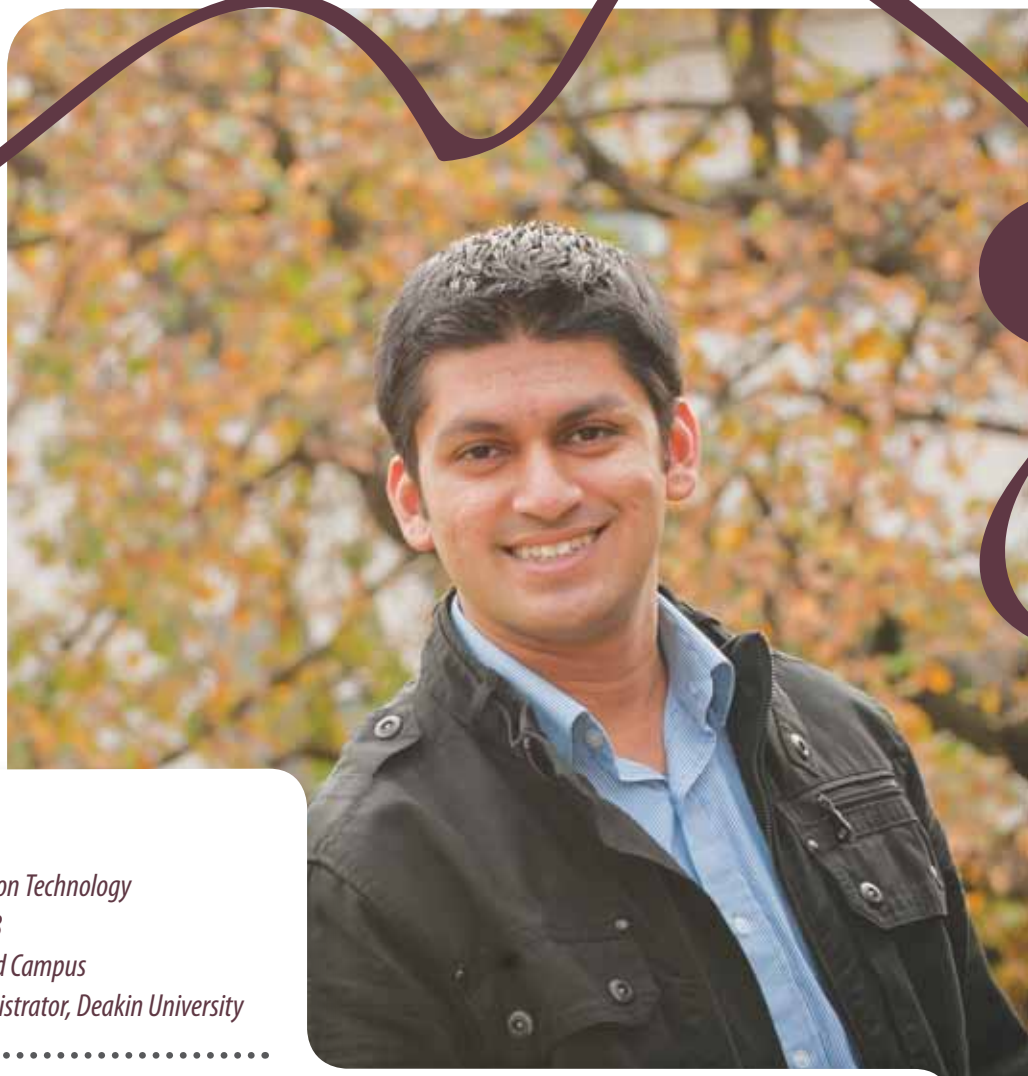
2 Most courses start in Trimester 1. This column indicates whether you have the option of commencing your studies in Trimester 2 or Trimester 3. Not all units are offered in every trimester.

CSP = Commonwealth Supported Place
FPP = Fee-Paying Place
FT = Full time
T1 = Trimester 1
T2 = Trimester 2
T3 = Trimester 3

Students in one of Deakin's state-of-the-art learning spaces.

KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus



•STUDENT• PROFILE

*Ralfy Machado*
*Master of Information Technology (Professional), 2008*
*Melbourne Burwood Campus*
*Employed: IT Administrator, Deakin University*

After completing secondary and tertiary education in his homeland of India, Ralfy Machado was determined to fulfil his life's goal of becoming an IT professional.

'In my family, I was always known as a 'tech-savvy son,' it was a hobby to collect gadgets and IT magazines to keep myself updated, as well as taking up challenges by working on software,' he says.

When deciding where to undertake postgraduate study, Ralfy spoke to several friends who had completed postgraduate studies who shared their Deakin study experience.

'Furthermore, I did my own study and research on the Deakin web site for my masters course. It gave me insight into what I would be learning and the areas I planned on specialising in. With all the positive feedback I thought Deakin was the right choice for me,' he says.

*'(Deakin) showed me the right path and has given me all the knowledge I need to be an IT professional.'*

Now an IT Administrator in the University's Division of Student Life, Ralfy says the ongoing growth and diversity in the field of IT was the motivation behind his study and career path.

'I can proudly say that I learn something new every day and I enjoy what I learn,' he says.

He says an internship was the highlight of his postgraduate studies and the masters program gave him the skills he needed for his career.

'(Deakin) showed me the right path and has given me all the knowledge I need to be an IT professional. The assignments and their deadlines gave me the chance to manage my time well. I also found the teaching staff at Deakin very friendly which really encouraged me to clarify any doubts or questions.'

# Coursework degrees

## Graduate Certificate of Information Technology

0.5 B X *Course code: S578*

*Admission requirements: An approved undergraduate degree. Applicants who hold an undergraduate degree in a non-computing field will be required to take a compulsory core of four foundation units. Admission may also be granted to candidates with relevant work experience in an IT environment acceptable to the University.*

The Graduate Certificate of Information Technology caters to the needs of students from non-computing backgrounds who wish to acquire a new set of skills, and/or for those who wish to ratify their industrial experience by gaining recognised academic qualifications.

The Graduate Certificate of Information Technology course comprises four units, which can be completed part time. A graduate certificate student can transfer to the graduate diploma course (and vice versa). Each unit is based on an average loading of 10 hours a week. This time is associated with the study of unit material, prescribed reading and completion of coursework which is submitted for assessment. Submission of assignments is mostly in electronic format.

### Course structure

You must complete 4 credit points of Level 7 IT course grouped units from the Master of Information Technology S778 (page 9).

If you are entering the course without an undergraduate degree in computing, you will be required to complete the following units:

*Trimester 1*
SIT771 Object-Oriented Development
SIT773 Software Design and Engineering

*Trimester 2*
SIT772 Database and Information Retrieval
SIT774 Web and Internet Programming

## Graduate Diploma of Information Technology

1 B X *Course code: S678*

*Admission requirements: An approved undergraduate degree. Applicants who hold an undergraduate degree in a non-computing field will be required to take a compulsory core of four foundation units.*

The Graduate Diploma of Information Technology caters to the needs of students from non-computing backgrounds who wish to acquire a new set of skills, and/or for those who wish to ratify their industrial experience by gaining recognised academic qualifications.

Students contemplating continuation into the Master of Information Technology should note that there are four specialised streams: network computing, software development, IT services and IT security.

Some units are available in more than one specialised stream.

### Course structure

You must complete 8 credit points of level 7 IT course grouped units from the Master of Information Technology S778 (page 9).

If you are entering the course without an undergraduate degree, you must complete the following foundation units in place of elective units:

*Trimester 1*
SIT771 Object-Oriented Development
SIT773 Software Design and Engineering
*plus 2 credit points from units listed under Master of Information Technology.*

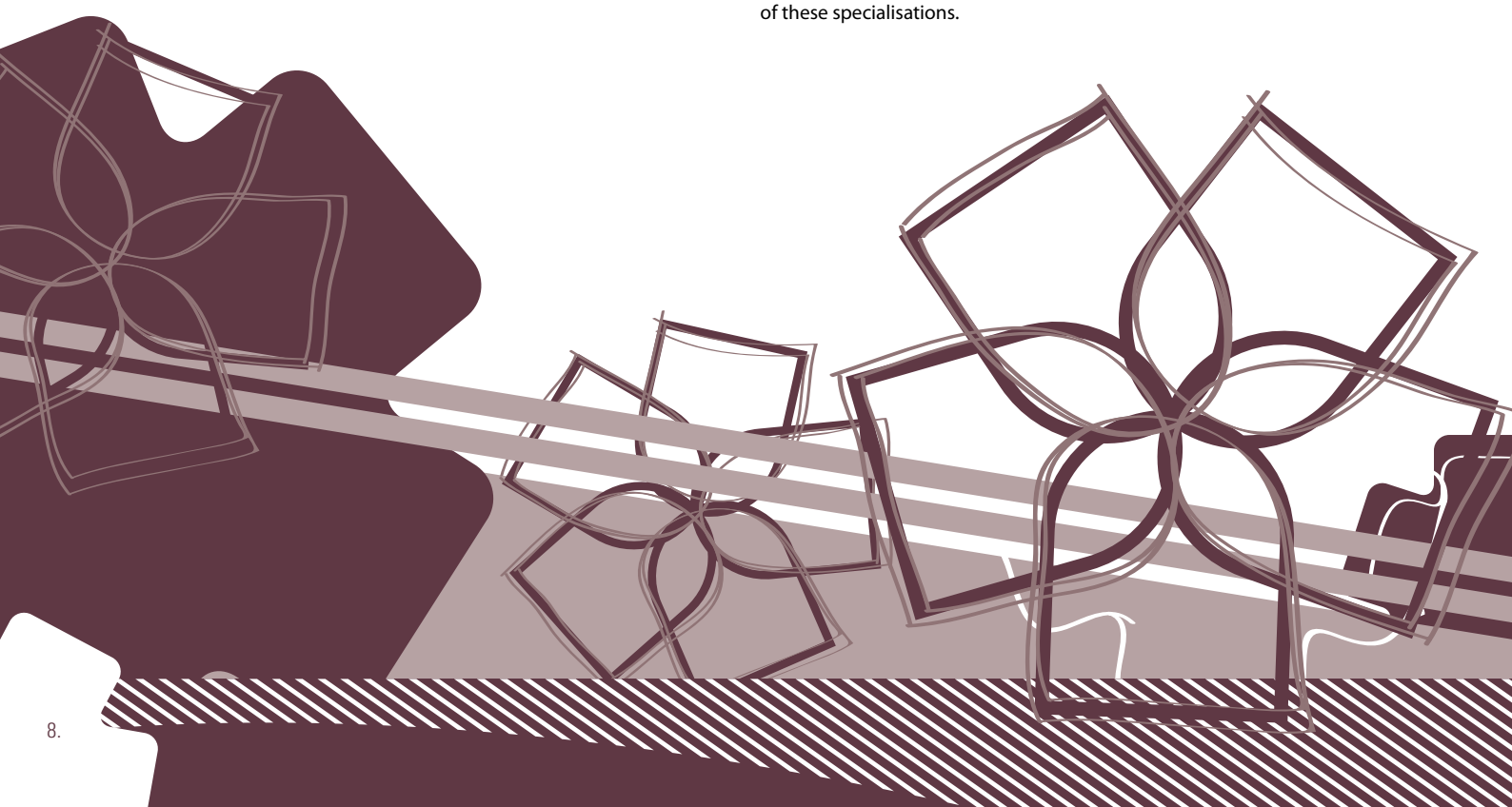
*Trimester 2*
SIT772 Database and Information Retrieval
SIT774 Web and Internet Programming
*plus 2 credit points from units listed under Master of Information Technology.*

### Specialisations

If you are contemplating continuation into the Master of Information Technology, you should note that there are four specialisations:

» network computing
» software development
» IT security
» IT services.

See the Master of Information Technology course entry on page 9 for details of these specialisations.



KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus

## Master of Information Technology

1.5 B X *Course code: S778*

*Admission requirements: Applicants must normally hold an approved undergraduate degree. Applicants with an undergraduate degree in a non-computing field will be required to take four compulsory foundation units. Applicants who do not have a degree should contact the academic coordinator.*

Deakin's Master of Information Technology is designed to provide specialised information technology skills by providing up-to-date knowledge of recent developments in computing technology, as well as covering the technical and theoretical foundations of these topics, giving you the opportunity to apply this knowledge in practice.

The course provides a leading-edge study environment, producing appropriately educated and qualified IT professionals who are eminently employable.

You will obtain a sound knowledge and understanding of general issues, concepts and practices in IT and a broad knowledge and understanding of the technological aspects of IT.

### Course structure

The course comprises 12 credit points. Your course structure will depend upon your basis of entry into the Master of Information Technology, and your preferred specialism. For example, a student with a non-computing undergraduate degree will have to undertake the four compulsory foundation units. All students must also complete two core project units: SIT764 Project Management and SIT782 Practical Project, and at least one specialism.

If you wish to follow the network computing specialism, you will then have to take the four units that make up that particular specialism. You may then elect to make up the remaining 2 credit points in the required 12 credit point structure from other SIT7xx units, as listed under general units.

### Foundation units

*Trimester 1*
SIT771 Object-Oriented Development
SIT773 Software Design and Engineering

*Trimester 2*
SIT772 Database and Information Retrieval
SIT774 Web and Internet Programming

### Core project units

SIT764 Project Management
SIT782 Practical Project

### General units

SIT701 Internet Core and Enterprise Routing
SIT702 Advanced Network Design and Engineering
SIT703 Advanced Digital Forensics
SIT704 Advanced Topics in Digital Security
SIT717 Advanced Data Mining
SIT725 Advanced Software Engineering
SIT735 Communications Network Security
SIT737 Service Oriented Architectures and Technologies
SIT751 Java Network Programming
SIT763 IT Security Management
SIT764 Project Management
SIT775 IT Services in Organisations
SIT780 eSystems Software Development
SIT783 Linux and Open Source Software
SIT784 Mobile and Ubiquitous Computing
SIT794 Services Management
SIT795 Information Technology Industry Study Tour

### Specialisations

#### Network computing

SIT701 Internet Core and Enterprise Routing
SIT702 Advanced Network Design and Engineering
SIT751 Java Network Programming
SIT784 Mobile and Ubiquitous Computing

#### Software development

SIT725 Advanced Software Engineering
SIT751 Java Network Programming
SIT780 eSystems Software Development
SIT783 Linux and Open Source Software

#### IT security

SIT703 Advanced Digital Forensics
SIT704 Advanced Topics in Digital Security
SIT735 Communications Network Security
SIT763 IT Security Management

#### IT services

SIT737 Service Oriented Architectures and Technologies
SIT775 IT Services in Organisations
SIT794 Services Management

*plus*
SIT717 Advanced Data Mining
*or any other approved elective unit at Level 7 (across the University).*

FOR MORE INFORMATION VISIT
**www.deakin.edu.au/scitech/it**

# Coursework degrees

## Master of Information Technology (Professional)

2 B X *Course code: S779*

*Admission requirements: Applicants must normally hold an approved undergraduate degree. Applicants with an undergraduate degree in a non-computing field will be required to take four compulsory foundation units. Applicants who do not have a degree should contact the academic coordinator.*

This award, titled the Master of Information Technology (Professional), is designed to ensure that graduates are not only technically skilled, but also possess a positive approach to solving practical problems with the ability to work as part of a team.

A 4 credit point extension to the Master of Information Technology is possible.

Deakin's Master of Information Technology (Professional) has been developed to fulfil the demand for people who will graduate with a complete portfolio of skills and experience.

The MIT (Professional) also satisfies the graduate demand for a clear pathway to PhD studies.

The course structure includes a research project that is designed to be completed in industry. This enables you to specialise and apply advanced technical knowledge and skills in a work setting (where appropriate), and encourages the development of professional networks.

### Course structure

You must complete 16 credit points of study, meeting all requirements for the 12 credit point Master of Information Technology, followed by a further 4 credit points from below:

SIT790 Research Project (4 credit points) or
SIT791 Professional Practice (4 credit points) or
SIT792 Research Project Part A (2 credit points) and
SIT793 Research Project Part B (2 credit points)
*or 4 additional credit points chosen from the list of general units in the Master of Information Technology.*

You are encouraged to complete either the internship or research project.

FOR MORE INFORMATION VISIT
**www.deakin.edu.au/scitech/it**

## Master of Networking and Security

1.5 B *Course Code: S781*

*Graduate Diploma of Information Technology S678 (Exit option)*
*Graduate Certificate of Information Technology S578 (Exit option)*

*Admission requirements: You must hold an approved three-year undergraduate degree in an information technology or related field. Alternative admission criteria for applicants with a non-computing degree includes demonstrable professional experience, comprising at least five years experience in IT security, networking or a related field.*

The Master of Networking and Security is an inter-disciplinary course that covers network computing, information systems, cryptography, ubiquitous computing, digital forensics and law. The course aims to train you in two related fields that are widely recognised as critical to the successful provision of IT infrastructures that can effectively support the achievement of strategic business goals. The course will provide you with advanced skills needed to successfully design, maintain and manage network infrastructures and applications; to effectively secure these infrastructures, information systems and assets; and to investigate any network and information security breaches through digital forensic techniques.

### Course structure

You must complete 12 credit points of study.

***Year 1***
*Trimester 1*
MSC767 Business Security Management
SIT701 Internet Core and Enterprise Routing
SIT764 Project Management
SIT704 Advanced Topics in Digital Security

*Trimester 2*
SIT703 Advanced Digital Forensics
SIT784 Mobile and Ubiquitous Computing
SIT735 Communications Network Security
*plus one IT elective unit*

***Year 2***
*Trimester 1*
MLM770 Law and the Internet
SIT751 Java Network Programming
SIT782 Practical Project
*plus one IT elective unit*

Note: The course has been designed so that you have the opportunity to exit after 4 credit points with a Graduate Certificate of Information Technology or after 8 credit points with a Graduate Diploma of Information Technology.

KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus

## Master of Information Security

1 B *Course code: M781*

*Application requirements: A four-year bachelors degree or equivalent, or a three-year bachelor degree plus a minimum of two years relevant professional or managerial experience in an IS environment.*

Deakin's Master of Information Security provides you with the skills, knowledge and interdisciplinary understanding required for designing and managing an organisation's security requirements in today's dynamic global business environment. This includes an appreciation of the security aspects associated with information management, information technologies, system management and the relevant legal obligations.

### Course structure

You must complete 8 credit points of study comprising 4 credit points of core units and 4 credit points of elective units selected from a specified list.

#### Core units

MLM770 Law and the Internet
MLM786 Electronic Crime
MSC755 Risk Management for Business Information Systems
MSC767 Business Security Management

#### Elective units

Select 4 credit points of units from:

MLM788 International Financial Crime
MLM792 Anti-Money Laundering and Counter-Terrorism Financing
MSC752 eBusiness Strategies
MSC753 eBusiness and Supply Chain Management
MSC768 Knowledge Management
MSC769 Information Systems Infrastructure
MSC770 Information Systems and Global Issues
SIT703 Advanced Digital Forensics
SIT704 Advanced Topics in Digital Security
SIT735 Communications Network Security
SIT775 IT Services in Organisations
SIT784 Mobile and Ubiquitous Computing
*or you may choose an alternative elective unit with prior written approval of the course team chair.*

## Graduate Certificate of Information Systems

0.5 B X *Course code: M522 (Full time Trimester 2 only)*

*Admission requirements: A three-year bachelors degree or equivalent, or five years of relevant work experience or a combination of relevant training and work experience.*

Deakin's information systems studies offer specialist, advanced courses in the business-oriented principles and practices of information systems, electronic business and supply chain management. The courses integrate information systems studies with relevant complementary studies in business.

This Graduate Certificate allows articulation into the Graduate Diploma of Information Systems, Master of Information Systems (MIS), Master of Accounting Information Systems[1] and combined MIS courses.

### Course structure

You must complete 4 credit points of study comprising 2 credit points of core units and 2 credit points of information systems elective units.

#### Core units

MSC705 Information Systems Analysis and Design
MSC770 Information Systems and Global Issues

#### Elective units

Select 2 credit points of units from:

MPM701 Business Process Management
MSC703 Business Data Management
MSC752 eBusiness Strategies
MSC753 eBusiness and Supply Chain Management
MSC754 Information Systems Business Analysis
MSC755 Risk Management for Business Information Systems
MSC756 Project Management
MSC767 Business Security Management
MSC768 Knowledge Management
MSC769 Information Systems Infrastructure
MSC795 eBusiness Processes
MSQ791 Data Analysis for Managers

1 Students articulating from the Graduate Certificate of Information Systems will not receive any credit for prior learning into the Master of Accounting Information Systems for units completed.

Deakin's online units are supported by cutting-edge technology.

# Coursework degrees

## Graduate Diploma of Information Systems

1 B X *Course code: M622*

*Admission requirements: A three-year bachelors degree, or completion of the Graduate Certificate of Information Systems.*

Deakin's information systems studies offer specialist, advanced courses in the business-oriented principles and practices of information systems, electronic business and supply chain management. The courses integrate information systems studies with relevant complementary studies in business.

This graduate diploma allows articulation into the Master of Information Systems (MIS) and combined MIS courses.

### Course structure

You must complete 8 credit points of study comprising 3 credit points of core units and 5 credit points of information systems units which may be grouped to form an information systems specialisation. Students electing to undertake an information systems specialisation must choose from either the eBusiness and supply chain management specialisation, or the IS project management specialisation. See the Master of Information Systems (M722) entry for available units.

**Core units**

MSC705 Information Systems Analysis and Design
MSC769 Information Systems Infrastructure
MSC770 Information Systems and Global Issues

**Elective units**

Select 5 credit points of units from:

MPM701 Business Process Management
MSC703 Business Data Management
MSC752 eBusiness Strategies
MSC753 eBusiness and Supply Chain Management
MSC754 Information Systems Business Analysis
MSC755 Risk Management for Business Information Systems
MSC756 Project Management
MSC767 Business Security Management
MSC768 Knowledge Management
MSC795 eBusiness Processes
MSQ791 Data Analysis for Managers

## Master of Information Systems

1.5 B X *Course code: M722*

*Admission requirements: A three-year bachelors degree or equivalent, or completion of the Graduate Certificate of Information Systems or Graduate Diploma of Information Systems.*

Deakin's Master of Information Systems has been developed in response to the rapid growth in the use of information systems and eCommerce applications by businesses and governments internationally.

The course provides specialist skills in the business-oriented principles and practices of information systems and eCommerce. It focuses on the strategic use of information in a business and policy context, supported by a sound technical understanding and capability in specific areas of information systems, particularly eBusiness, supply chain management, and project management. The course is primarily aimed at IT professionals who wish to extend their expertise in information systems and eCommerce, as well as graduates from other disciplines who wish to understand the implications of eCommerce in their business. The course meets the needs of students from different backgrounds and incorporates extremely flexible methods of delivery combining the use of high quality off-campus study materials with periods of intensive face-to face learning, as well as the option to undertake many units entirely through electronic teaching.

### Course structure

You must complete 12 credit points of study, comprising 3 credit points of core units, 5 credit points of information systems units which may be grouped to form an information systems specialisation, and 4 credit points of information systems units or elective units which may be grouped to form another information systems specialisation or an interdisciplinary specialisation.

**Core units**

MSC705 Information Systems Analysis and Design
MSC769 Information Systems Infrastructure
MSC770 Information Systems and Global Issues

Deakin's information systems courses are complemented with relevant studies in business.

KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus

## Information systems specialisations

### Business analysis

MPI700 Postgraduate Internship
MPM701 Business Process Management
MSC712 Advanced Systems Analysis and Design
MSC754 Information Systems Business Analysis

### eBusiness and supply chain management

MSC753 eBusiness and Supply Chain Management

*Plus 3 credit points of units from:*
MSC752 eBusiness Strategies
MSC756 Project Management
MSC767 Business Security Management
MSC768 Knowledge Management
MSC795 eBusiness Processes
MSQ791 Data Analysis for Managers

### IS project management

MSC756 Project Management

*Plus 3 credit points of units from:*
MPI700 Postgraduate Internship
MSC753 eBusiness and Supply Chain Management
MSC754 Information Systems Business Analysis
MSC755 Risk Management for Business Information Systems
MSQ791 Data Analysis for Managers

### IS research thesis

MPP704 Research Project (4 credit points)

FOR MORE INFORMATION VISIT
**www.deakin.edu.au/mis**

## Interdisciplinary specialisations

### Commercial law

MLM720 Introduction to Commercial Law

*Plus 3 credit points of units from:*
MLC703 Principles of Income Tax Law
MLM703 Chinese Commercial Law
MLM721 International Competition Law and Policy
MLM731 Corporations Law

### Enterprise security management

MLM770 Law and the Internet
MLM786 Electronic Crime
MSC755 Risk Management for Business Information Systems
MSC767 Business Security Management

### International trade and business

Select 4 credit points of units from:

MPE707 International Banking and Finance
MPE711 Global Trade and Markets
MPE781 Economics for Managers
MPK736 International Marketing
MPM703 Business Strategy and Analysis
MPT735/MPM735 International Business Management#

### IS management issues

Select 4 credit points of units from:

MMH707 Managing Transitions and Change
MPC741 IT Strategy and Management
MPR721/MPM721 Organisational Behaviour*
MPR722/MPT722/MPM722 Human Resource Management*#
MSQ791 Data Analysis for Managers

### Marketing

Select 4 credit points of units from:

MMK733 Strategic Marketing
MMK737 Online Marketing
MMK751 Services Marketing
MPK701 Research Design and Analysis
MPK712 Advertising and Consumer Behaviour
MPR732/MPK732 Marketing Management*
MPK736 International Marketing

Electives from other schools:
MPA701 Accounting
MPT753/MPF753 Finance*

* MPR code denotes residential version of the unit. The cost is in addition to the tuition fees.
\# MPT code denotes study tour version of the unit. The cost is in addition to the tuition fees.

# Coursework degrees

## Combined courses

### Master of Information Technology/ Master of Business Administration (International)

2 B X *Course code: D754*

*Admission requirements: Applicants must have normally completed an undergraduate degree equivalent to three years of tertiary study in an information technology or related discipline (a grade point average of 65 per cent or more in the undergraduate degree will normally be required).*

The Master of Information Technology/Master of Business Administration (International) combines two of Deakin University's premier postgraduate coursework degrees to meet the emergent need for highly proficient managers in an information technology-driven business world.

This combined degree requires you to complete 16 credit points of study over two years of full-time study, or part-time equivalent.

#### Course structure

You must complete 16 credit points of study comprising 8 credit points of Information Technology units and 8 credit points of Business Administration (International) units.

#### Information Technology component

You must complete 8 credit points as prescribed below:

SIT764 Project Management
SIT782 Practical Project
*plus 6 credit points of elective units from the Master of Information Technology.*

You may opt to complete a specialisation from the Master of Information Technology in one of the following areas:

» network computing
» software development
» IT security
» IT services.

Refer to the Master of Information Technology (S778) course entry for details of specialisation units.

Students who do not have an undergraduate degree in information technology or related fields are required to complete the following four Master of Information Technology foundation units in place of elective units:

SIT771 Object-Oriented Development
SIT772 Database and Information Retrieval
SIT773 Software Design and Engineering
SIT774 Web and Internet Programming

#### Business Administration (International) component

You must complete 8 credit points of Business Administration study comprising 7 core units and 1 unit selected from a group of three:

MPA702 Financial Interpretation
MPE707 International Banking and Finance
MPE781 Economics for Managers
MPK732/MPR732 Marketing Management*
MPM701 Business Process Management
MPM703 Business Strategy and Analysis
MPM735/MPT735 International Business Management#

*Plus 1 credit point from:*
MPE711 Global Trade and Markets
MPK701 Research Design and Analysis
MPM722/MPR722/MPT722 Human Resource Management*#

* MPR code denotes residential version of unit. The cost is in addition to the tuition fees.
\# MPT code denotes study tour version of unit. The cost is in addition to the tuition fees.

### Master of Information Technology/ Master of Commerce

2 B X *Course code: D750*

*Admission requirements: Candidates must have a recognised undergraduate degree from an approved institution, or have completed the Graduate Certificate or Graduate Diploma of Information Technology.*

Combining a professional business qualification with a specialist qualification in IT will provide graduates with the skills needed to effectively utilise IT in business operations and decisions. IT has changed the way the world communicates. Government, business and finance sectors have changed dramatically and need IT professionals who can translate the potential of IT into practical real-world software systems. The Master of Information Technology offers up-to-date specialist, technical expertise in key areas of computing and information technology.

The Master of Commerce provides the professional credentials for a range of opportunities in Australia and overseas, from traditional vocations to the new economy.

Sophisticated delivery using electronic communication for lectures, conferences, group work and debates among students, as well as for assessment, makes the Master of Commerce an ideal course to combine with the Master of Information Technology.

#### Course structure

You must complete 16 credit points of study comprising 6 credit points of core units, 6 credit points of elective Information Technology units (which may form an IT specialisation), and 4 credit points from the Master of Commerce not previously studied, which must form a Master of Commerce specialisation.

Students who do not have an undergraduate degree in IT or related fields are required to complete the following four foundation units in addition to the standard core units:

SIT771 Object-Oriented Development
SIT772 Database and Information Retrieval
SIT773 Software Design and Engineering
SIT774 Web and Internet Programming

#### Core units

MPA701 Accounting
MPC701 Information Systems for Business
MPE781 Economics for Managers
MPF753 Finance
SIT764 Project Management
SIT782 Practical Project

#### Elective units

Select 6 credit points of Master of Information Technology grouped units. Refer to the Master of Information Technology (S778) page 9 for details of unit offerings.

*Plus 4 credit points of units not previously studied from the Master of Commerce (choice of units must form at least one Master of Commerce specialisation).*

Commerce graduates will normally be precluded from one or more of the core Commerce units and required to undertake substitute units from the full range of commerce grouped units. These students are expected to specialise in an area other than their undergraduate major(s).

#### IT specialisations

» Network computing
» Software development
» IT security
» IT services

Refer to the Master of Information Technology (S778) course entry for details of specialisation units.

Refer to the *2012 Business and Law Postgraduate Study Area Booklet* for Master of Commerce specialisations and units.

KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus

## Master of Information Technology/ Master of Information Systems

2 B X *Course code: D751*

*Admission requirements: Applicants for the Master of Information Technology must normally hold an approved undergraduate degree. If you have an undergraduate degree in a non-computing field you will be required to take four compulsory foundation units as part of your course. Students who do not have a degree should contact the academic coordinator. Applicants for the Master of Information Systems must hold a bachelors degree or equivalent in the related discipline. Applicants must meet the admission requirements for the component degrees.*

This combined degree will allow graduates to possess the soft skills to design information systems that meet the need of stakeholders and the hard IT skills necessary to implement them. Government, business and finance sectors have changed dramatically and need IT professionals who can translate the potential of IT into practical real-world software systems. In tune with the latest international developments, the Master of Information Technology offers up-to-date specialist, technical expertise in key areas of computing and information technology.

The Master of Information Systems is designed to provide you with high-quality and interdisciplinary education and training across the breadth of information systems. The course offers career opportunities and enhanced employment prospects to students who desire skills and knowledge relevant to their pursuit of a career in Information Systems (IS).

### Course structure

You must complete 16 credit points of study, comprising 6 credit points of core units (depending upon previous studies), an Information Systems specialisation of 4 credit points, and 6 credit points of elective units from the Master of Information Technology course-grouped units which may be used to form a specialisation.

Students who do not have an undergraduate degree in IT or related fields are required to complete the following four foundation units in addition to the standard core units:

SIT771 Object-Oriented Development
SIT772 Database and Information Retrieval
SIT773 Software Design and Engineering
SIT774 Web and Internet Programming

### Core units

MSC705 Information Systems Analysis and Design
MSC752 eBusiness Strategies
MSC769 Information Systems Infrastructure
MSC770 Information Systems and Global Issues
SIT764 Project Management
SIT782 Practical Project

FOR MORE INFORMATION VISIT
**www.deakin.edu.au/scitech/it**

### Information Technology elective units and specialisations

Select 6 credit points of Master of Information Technology course grouped units. Refer to the Master of Information Technology for details of unit offerings and specialisms.

Students entering this combined course with recent tertiary studies in computing (or equivalent) may be eligible for preclusion from study of any or all of the foundation SIT units (SIT771, SIT772, SIT773, SIT774). In the instances where a preclusion is awarded, a student will be required to replace the precluded unit(s) with an equivalent number of credit points (units) from the IT-grouped elective units.

### Information Systems specialisations

Select 4 credit points to form an Information Systems specialisation chosen from:

» business analysis
» eBusiness and supply chain management
» IS project management
» IS research thesis.

Refer to the Master of Information Systems (M722) course entry on page 12 for details of specialisations and units.

International students at an IT workshop.

# Research at Deakin

Universities are about knowledge – creating, discovering, analysing, sharing and dispersing knowledge. Research is at the core of these activities and helps to make Deakin University a vibrant place to study.

At Deakin we take pride in being relevant to students and to their communities, not just in the courses we teach, but in the research we carry out.

Studying at a university that is committed to research that matters means you have the opportunity to learn from people who are making a real difference in the world.

Our academic and research staff are highly regarded and at the cutting edge in their fields of research. This is important, regardless of whether or not you want to pursue a research career, because it means that you will graduate with the latest knowledge in your chosen field.

Deakin is serious about providing excellent support and experiences for our research students, most of whom have opportunities to work with partner collaborators nationally and internationally, present at international conferences and use world-class facilities within Australia and abroad.

There has never been a more exciting or compelling time to be at Deakin University as it moves confidently towards the goal of improving the University's research performance in order to position itself in the top third of the Australian higher education sector.

This is being achieved by building a critical mass of researchers who will develop a distinctive, broad-based portfolio of high quality discovery, applied and commercial research.

Deakin University provides research degree programs to match a variety of career plans and personal circumstances. Part-time or full-time study is available on campus and some programs may also be available off-campus.

The two main types of research degree we provide are the research masters and the Doctor of Philosophy (PhD). A number of professional doctorate programs in Psychology (Doctor of Psychology) are also offered.

A **masters degree** is awarded to a candidate for making an original contribution to knowledge achieved in one to two years of full-time candidature or the part-time equivalent. The focus of these postgraduate degrees is on research, but some coursework may be included. The masters degree is an advanced qualification that is relevant for many careers, in areas such as education, nursing, law and engineering.

A **doctoral degree** is awarded to a candidate for making a substantial original contribution to knowledge achieved in two to four years of full-time candidature or the part-time equivalent. The PhD is recommended for those interested in pursuing a career in academia or research and is an ideal basis for many other careers.

To ensure you enrol in a research program that meets your needs and expectations, please discuss the available options with the Faculty of Science and Technology.

## More information

Research Services Division
Phone: +61 3 9251 7124
research-hdr@deakin.edu.au
**www.deakin.edu.au/future-students/research**

Both on and off-campus students have access to comprehensive e-learning facilities.

• STUDENT •
PROFILE

*Silvio Cesare*
*PhD – Information Technology*
*Melbourne Burwood Campus*

Like many postgraduate students, Silvio Cesare embarked down a number of study paths before settling into his chosen career and now, PhD.

'I began several degrees after finishing high school, but left university without a bachelors degree. Later on, I worked in information technology in several locations, including two years overseas in France and America doing development for a security company. In America my role was as a software architect,' he says.

When Silvio returned to Australia, he completed a bachelors degree in Information Technology – followed by a research degree in informatics – in central Queensland.

But with the relocation of his research supervisor, Silvio decided to move to Melbourne and undertake a PhD at Deakin.

'Melbourne is a great city to live in and studying at Deakin gives me lifelong skills that I would not be able to develop from employment in industry,' he says.

Silvio's research focuses on computer security and includes malware detection and automated vulnerability discovery.

*'Melbourne is a great city to live in and studying at Deakin gives me lifelong skills that I would not be able to develop from employment in industry.'*

'I read general literature to improve my core skills, and review research publications to be up-to-date with the latest developments. Once I have established a sound approach for malware detection or vulnerability discovery, I implement it and evaluate how it works against real malware and software. I then write up the results with the aim of publishing and for use in my thesis,' Silvio says.

Using his research to tackle problems he encountered in the industry, Silvio's aim is to develop practical and beneficial work-place tools.

'Because I tackle industry-based problems, I can use these skills in future employment. I see myself as continuing to be involved in research once my degree is complete and a PhD is a demonstration of these skills that employers value,' he says.

Silvio adds that while industry jobs come and go, a research degree is an achievement for life.

'It only requires a small amount of time in consideration of the time in an entire career. It gives you an opportunity to develop a strong foundation which peaks by demonstrating state-of-the-art research. These skills will be useful in all future vocations.'

# Research in Information Technology

| Course name | Course code | Years full time | Campus |
|---|---|---|---|
| **Research degrees** | | | |
| Master of Science | S813 | 1 – 2 | B G X |
| Doctor of Philosophy | S913 | 3 – 4 | B G X |

## Research

The School of Information Technology hosts two Faculty Research Clusters (FRC): Innovations Through Broadband FRC and Securing Cyperspace FRC.

### Innovations Through Broadband FRC

The objectives are: to develop a set of theories, technologies and applications to support the innovation activities, especially in SMEs, and the development of these theories and technologies into cloud computing services; and to develop a new cloud facility (clouds are inexpensive, internet accessible on demand environments where services are provided to clients as virtualised computing resources) to provide capabilities for supporting the innovation life-cycle in SMEs through the provision of cloud services. In particular, the cloud will provide advanced services developed in the previous stage that are otherwise out of reach for SMEs because of their sophistication, complexity, and expensiveness.

### Securing Cyperspace FRC

The objectives are: to provide digital security across mobile and fixed mechanisms, to include networks, stand-alone machines, mobile phones, PDAs and other miniature devices (included are topics such as malicious software, cryptographic methods, privacy and anonymity technologies as well as forensic investigations across all of the above in the event of a security break); and to develop optimisation and clustering algorithms, as well as employing well-known reliable algorithms.

Research areas within the School of Information Technology include:

### Information security and forensics

This research group works in the areas of information security management, critical infrastructure protection, data management and individual privacy, security and the internet, information privacy and security, digital forensics and the law.

### Network computing

The network computing research group focuses on the security and efficiency of networked computer systems and applications. In particular, the group investigates: security of networked computer systems and applications, especially models, techniques, and methods in dealing with internet crimes; and efficiency in networked computer systems and applications, especially models, techniques, and methods in dealing with the use of resources of web-based services.

### Optimisation, Intelligent Modelling and Learning (OptIMAL)

OptIMAL spans several disciplines including mathematical modelling, operations research, fuzzy systems, computational intelligence bioinformatics and machine learning. Its mission is to foster an environment of collaborative scientific excellence, leading to discoveries involving the development of new optimisation methods and their numerous practical applications; the development of novel methods of data analysis, clustering and classification and their applications; and optimal design of networks and wireless systems.

### Pervasive and service computing

This research area spans distributed systems; cluster, cloud, and grid computing; and distributed operating systems all under the umbrella of autonomic computing and virtualisation. The future of computing lies in the harnessing of many computational resources to complete a required task. To enable this, many pervasive computing research problems need to be addressed. Service and autonomic computing play an important role in their solutions.

FOR MORE INFORMATION VISIT
**www.deakin.edu.au/scitech/research**

KEY

3 Course duration in years
PT Part time
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus

## Honours

Honours is an additional year of specialised study, usually taken after the completion of a bachelors degree, or embedded as part of a bachelors degree.

Honours provides an excellent opportunity to learn new skills and obtain an in-depth understanding of a particular topic of personal interest.

The honours programs at Deakin are designed to provide you with the knowledge and research skills required to undertake a postgraduate course by research, advanced professional training or pursue diverse employment opportunities.

To find out more about honours, please visit **www.deakin.edu.au/honours.**

## More information

For more information about research, please contact:

Faculty of Science and Technology
Phone: +61 3 5227 2270 or +61 3 5227 2134
scitech-research@deakin.edu.au
**www.deakin.edu.au/scitech/research**

Deakin's academic and research staff are highly regarded in their fields of research.

# Choose how you study

Deakin offers you the flexibility and choice to make your learning experience fit with your lifestyle, work and personal commitments. With four campuses and off-campus study options, you choose where and when you study. You can choose from a variety of teaching delivery methods including traditional on-campus lectures, podcasts, iLectures, online tutorials and residential programs. Flexible course entry and exit points, and full-time and part-time study options all allow you to choose the pace of your study.

## Off-campus study*

Deakin supports more than 9500 off-campus students. Studying off campus is a popular choice for postgraduate students as it allows flexibility in terms of when and where you study. Off-campus units, or units offered by distance education, are similar to on-campus units. The only difference is that rather than attend classes in person, you study away from campus using a variety of other methods. These include online technologies, study guides, reading lists and audiovisual materials, as well as Deakin's Software Essentials package, which provides you with access to software you may need for your study.

Deakin offers a variety of coursework and research programs in off-campus study mode, all of which are accredited by the Accrediting Commission of the Distance Education and Training Council (DETC). To find out if the course you are interested in is available off campus, please refer to both the coursework table on page 6 and the research table on page 18.

Deakin provides an online orientation with everything you will need to get started as an off-campus student, including information about exams and assessment, Deakin Card, Deakin Studies Online (DSO), course materials and textbooks, library, study skills, student services, disability services and the Deakin University Student Association (DUSA). In addition, a face-to-face study skills program for off-campus students is conducted in February at Deakin campuses. Details are available from January each year at **www.deakin.edu.au/current-students/transition**.

Off-campus students are supported through our award-winning library services, interactive study methods such as iLectures and podcasts, online conferencing for peer support and communication between staff and students, and weekend classes for some subjects. Specialist off-campus career advisers and language and learning advisers can help you with course direction and the development of successful study skills and techniques.

You will also have a direct link to all your enrolment and fee records through StudentConnect, **www.deakin.edu.au/studentconnect**. StudentConnect allows you to access course completion details, eCAF (electronic Commonwealth Assistance Form) and eCAN (electronic Commonwealth Assistance Notice), exam timetables, fees information and results, make payments, find and print assignment coversheets, access Credit for Prior Learning information, re-enrol, receive confirmation of enrolment, track your assignments, update your address details and vary your enrolment.

For more information about off-campus study, please visit **www.deakin.edu.au/future-students/mature-age/study-online**.

## On-campus study*

On-campus students usually attend a combination of lectures and tutorials. Lectures vary in size from 20 to 280 students, while tutorial classes are generally smaller, more informal and allow for open discussion of issues raised in lectures. Assessment may take a variety of forms, including written work and tests undertaken in class, participation in class or laboratory sessions, and final examinations each trimester. Fieldwork or practical experience can also form a large part of the content and assessment of some units.

## Combine on and off-campus study*

Another aspect of the flexibility available to Deakin students is the option to combine on and off-campus study during your course (provided the units offered in your chosen course are available in both study modes). If you are undertaking your course on campus, you may find that some of the units in your course are also available in off-campus study mode, enabling you to combine on and off-campus study during your degree, if desired.

## Full-time or part-time study modes

You can study full time or part time depending on the number of credit points you take in each trimester, and you can also switch between full-time and part-time study and vice versa throughout your degree. Every unit (subject) you enrol in has a credit point value and most postgraduate units are equivalent to 1 credit point. If you are enrolled in 3 or more credit points in a trimester, you are deemed to be a full-time student for that trimester. A small number of courses are only available full time, and some are only available part time.

## Online learning

All courses have an online component. Access to online education adds another dimension to your degree and prepares you for success in your career. Online learning aims to complement, not replace, traditional teaching. Delivering units online creates an opportunity for you to learn in a variety of ways and gives you more control over your learning. You can access your online units 24/7, giving you the flexibility to study when and where it suits you. Online learning provides you with valuable experience in a world that is increasingly dependent on information technology.

## Contact hours

The contact hours for a coursework degree can vary depending on the type of course and your mode of study. For example, off-campus students are advised to spend approximately 10 hours of study per week per unit. If you are enrolled as an on-campus student, most units require three contact hours per week, plus up to seven hours per week of individual study time. Undertaking a research degree requires a much greater commitment of time than a coursework degree – at least 36 hours per week for 48 weeks of the year, for a full-time student. For more information, please visit **www.deakin.edu.au/courses**.

* Not all courses or units are available through on-campus study and off-campus study.

## Trimesters

Deakin operates a trimester system, meaning there are three 12-week study periods during the teaching year. Deakin's trimesters run from March to June, July to October and November to February. Our trimester system gives you greater flexibility and may create options for you to commence your degree sooner or at a more convenient time of year. It may enable you to speed up or slow down your study, or even fast-track the completion of your degree by taking extra units throughout the calendar year. You may even like to take a trimester off to fit your study around work, travel or family commitments. Undertaking study in Trimester 3 is not compulsory. For more information, please visit **www.deakin.edu.au/trimesters**.

## Single-subject (non-award) study

You can pursue your personal or professional interests with a Deakin single-subject (non-award) unit. Single-subject (non-award) study provides access to a wide variety of tertiary-level units. Most units offered by Deakin are available for non-award study. Some units have prerequisites or special requirements, but most are open to all. Enrolling in single-subject (non-award) study allows you to test the waters before enrolling in a full program. If successfully completed, the unit may be counted as Credit for Prior Learning towards your chosen course at Deakin, subject to admission to a course and approval by the Faculty.

## International study experiences

Deakin's Study Abroad and Exchange Office offers various programs including exchange, study abroad, short-term study programs, study tours and international volunteering opportunities which allow you to study overseas for a few weeks or a trimester while gaining credit towards your Deakin degree. Deakin has agreements with many universities around the world, giving you a broad range of destinations to choose from.

Studying overseas can be an enriching, life-changing experience, where you can gain in-depth knowledge and experience of another culture while learning more about your area of study through a new and exciting lens.

A range of travel grants and scholarships are available to help cover the cost of overseas study. For more information on study abroad, please visit **www.deakin.edu.au/future-students/student-exchange/exchange**.

## Work-Integrated Learning

Many Deakin courses provide opportunities to gain discipline-specific work experience through Work-Integrated Learning programs. Courses offering Industry-Based Learning (IBL) and internships are highly sought-after by employers and students alike as they play a critical role in the development of employability skills and job readiness.

Industry placements play a valuable role in preparing you for employment in your chosen field by giving you an opportunity to:

» apply and consolidate knowledge gained in your course
» explore career options relevant to your discipline
» develop professional competencies and networks.

A unique aspect of Deakin's Work-Integrated Learning programs is that most of them (except law) are credit-bearing, which means by undertaking a WIL program, you can gain credit towards your degree while learning on the job.

## Our Alumni Community

Once you complete your Deakin degree, you will be invited to become a member of our Deakin University Alumni Community to continue your relationship with the University and the networks you have developed while studying.

The Deakin University Alumni Community will enable you to keep or renew contact with your student and professional networks around the world and will help develop your career after you leave the University. Members have access to many exclusive benefits including discounts, professional networking opportunities and career development services.

Alumni membership is free and joining is easy.

Log on to **www.deakin.edu.au/alumni/register** to register for membership. Once you are registered you can then take advantage of the many benefits available.

# Fees and scholarships

### Research degree fees
Australian citizens, Australian permanent residents and New Zealand citizens are not required to pay tuition fees for the normal duration of their research degree candidature, i.e. up to a maximum of four years of full-time equivalent study for a doctoral candidate and two years of full-time equivalent study for a masters candidate.

### Coursework degree fees
When it comes to postgraduate study, some places are offered as Commonwealth Supported Places (CSPs); however, most places are available on a fee-paying basis only. The type of places available will depend on the course you are interested in.

#### Commonwealth Supported Place (CSP) students
Some postgraduate courses at Deakin offer Commonwealth Supported Places for students. A CSP is one in which the government pays a portion of the tuition costs and the student funds the balance. Depending on the course, a Commonwealth supported student at Deakin in 2011 can expect to pay between $4355 and $9080 per year of study. These fees may change for 2012.

CSP students can pay these fees up front or, if eligible, may defer payment by obtaining a loan via the Higher Education Contribution Scheme-Higher Education Loan Program (HECS-HELP). Repayments are made through the Australian taxation system once annual income exceeds the minimum threshold for repayment. Lump sum payments are also possible and attract a discount.

For more information visit the Government's *Going to Uni* web site at **www.goingtouni.gov.au** or phone the new student funding measures enquiry line on 1800 020 108.

#### Fee-paying students
As a fee-paying student you may be able to defer your course payment through the FEE-HELP loan program. Tuition fees are assessed based on the unit(s) in which you are enrolled. This means you pay fees for the units you choose in your course, rather than paying a fixed course price. Different units have different costs, based on how much it costs the University to provide the particular unit.

Course and unit details and associated fees can be found by using the course search tool **www.deakin.edu.au/future-students/courses**.

Please confirm fees when you are applying by visiting **www.deakin.edu.au/future-students/fees** or phoning 1300 DEGREE (1300 334 733).

### FEE-HELP loan program
FEE-HELP is a loan program that assists fee-paying students to defer the payment of their tuition fees. FEE-HELP can cover all or part of your tuition fees. The Australian Government pays the amount of the loan direct to your higher education provider.

Over your lifetime you can borrow up to a maximum FEE-HELP limit which is indexed annually. For all courses except medicine the maximum limit is $86 422 (2011). For medicine the maximum limit is $108 029 (2011).

For postgraduate courses, there is no real interest charged on your debt. Your accumulated HELP debt is indexed annually to maintain its real value, by adjusting it in line with changes in the cost of living (as measured by the Consumer Price Index).

FEE-HELP is administered under the Higher Education Support Act 2003 (HESA) by the Department of Education, Employment and Workplace Relations (DEEWR), the Australian Taxation Office, higher education providers and Open Universities Australia.

#### Am I eligible for FEE-HELP?
You are eligible for FEE-HELP assistance if you:

- are enrolled in a fee-paying postgraduate coursework program (not research)
- are not a Commonwealth supported student
- are an Australian citizen or a holder of an Australian permanent humanitarian visa (who meets eligibility requirements)
- meet the Tax File Number (TFN) requirements
- have not exceeded the maximum indexed FEE-HELP limit.

If you obtained a loan under HECS, PELS, BOTPLS or OLDPS prior to 2005, the amount you borrowed does not affect your eligibility for FEE-HELP. Only the amount borrowed to pay tuition fees using FEE-HELP after 1 January 2005 is counted towards the FEE-HELP limit.

Holders of other permanent visas are not eligible for FEE-HELP unless they are undertaking a bridging course for overseas trained professionals.

#### When do I start repaying my FEE-HELP loan?
FEE-HELP debts are added to any existing HECS or HECS-HELP debts to form a single HELP debt.

Students repay their loans through the Australian taxation system once their income is above the minimum threshold for compulsory repayment.

For more information you can download the Australian Government's 2011 FEE-HELP information brochure. Alternatively you can visit the Government's *Going to Uni* web site at **www.goingtouni.gov.au** or phone the new student funding measures enquiry line on 1800 020 108.

### Student income support
From 1 January 2012, students enrolled in masters by coursework programs will be eligible to apply for student income support payments such as Youth Allowance via Centrelink.

Masters by coursework students are encouraged to test their eligibility criteria for payments by visiting **www.centrelink.gov.au** or **www.deewr.gov.au**.

### Scholarship opportunities
Deakin offers a variety of scholarships to help support you financially during your studies, including the Deakin Postgraduate Scholarship which aims to assist students who, because of hardship, disability or other form of disadvantage, may not otherwise be able to further their education in postgraduate studies.

General information about scholarships at Deakin is available at **www.deakin.edu.au/scholarships**. More detail on scholarships for students enrolling in postgraduate research degrees at Deakin University is available at **www.deakin.edu.au/research/admin/scholarships**.

You can also visit the Commonwealth Department of Education, Employment and Workplace Relations (DEEWR) web site **www.deewr.gov.au** for links to a range of scholarships relevant to postgraduate study, including Australian postgraduate awards. Many industry and community scholarships are also available.

### International students
For information about fees and courses available to international students, please contact Deakin International for a copy of the *Postgraduate Course Guide for International Students* via email, deakin-international@deakin.edu.au.

### Course fees and tax benefits
When you enrol in a postgraduate course you may be entitled to an income tax deduction for your course fees and study-related expenses. You may be able to claim for your course fees, textbooks, stationery, student association fees, depreciation on equipment (for example your computer), or some of your travel expenses between home and the University or between work and the University.

For the Australian Taxation Office (ATO) to allow self-education expenses to be tax deductible a direct connection must exist between your course and your existing work. If you are studying the course in order to maintain or improve a skill or specific knowledge that is required in your existing work, your course expenses might be tax deductible.

To clearly demonstrate to the ATO that a direct connection exists, you might have to provide a supporting statement from your employer.

Please note that this information is provided as a guide only. For more information about study and tax arrangements, please speak with your accountant or tax adviser or visit the ATO web site **www.ato.gov.au**.

### Cost-sharing with employers
Some employers provide financial and other support, such as study leave, for staff members who are completing study that is directly related to their employment and the employer's core business. At Deakin, many people are studying a postgraduate course with their employer's help.

Study support policies benefit both the employer and the employee.

For employers, when they support relevant study programs, they can help attract and retain well-qualified and experienced staff members. Before you approach your employer for study assistance, you should check to see whether a support policy is in place.

Try to give your employer every reason to agree to your application. It can help if you provide your employer with a written submission outlining the benefits and the direct and indirect costs involved. The submission could include information about:

- the course you wish to study
- any tax-deductible aspects of the program
- a summary of the short and long-term benefits that would flow to you and your employer
- an estimate of the total course costs of fees, textbooks and other materials
- an estimate of the time you would be required to be away from work in order to attend classes and exams, prepare reports and so on
- what assistance you are requesting for aspects such as sharing of costs and granting of time off work.

Many employers are willing to share the course costs. They might either reimburse you after you have successfully completed the course or pay a percentage of the individual unit fees at the end of each trimester. If your employer is reluctant to support your study application, consider forming an agreement to cover contingencies. For example, propose that if you withdraw from or fail a subject or leave your job within a year of finishing the course, you will offer to pay back some of the fees your employer has paid.

Your employer might be concerned about how your studies will affect your availability and productivity at work. In the case of off-campus study it is easier to complete your studies outside working hours.

In many on-campus programs, classes are held outside regular working hours.

# How to apply

Applying for postgraduate programs at Deakin is easy – you can even track the progress of your application online.

## Coursework applications

Most students applying for a postgraduate coursework degree will need to have previously completed an undergraduate degree, however, there are other pathways. If you have considerable work or life experience you may be able to use this to obtain admission into a graduate certificate or graduate diploma course. You may then progress to a masters degree.

A postgraduate qualification can advance your career or you may use it to help change direction to a completely new industry. There are no application fees for Australian students, and if you are an international student there are no application fees if you apply online. Once you have applied, you can track the progress of your application online.

### Application process

**Step 1 – Choose your program**

You can select up to three course preferences.

**Step 2 – Register**

Register as a user www.deakin.edu.au/apply.

**Step 3 – Apply online**

Start your online application.

**Step 4 – Documentation**

Provide supporting documentation including:

- certified copies of your undergraduate and/or postgraduate qualification/s
- curriculum vitae detailing work experience applicable to your course application
- certified copy of name change documentation if you have previously studied at Deakin under a different name.

You may also be asked to provide a personal statement outlining what you hope to obtain from your qualification.

**Step 5 – Submit**

Submit the completed online application.

**Step 6 – Verification**

Once the application has been submitted you will receive an email to confirm the successful submission of the application including an application number.

You can track the progress of your application by logging into www.deakin.edu.au/apply where the status of your application will appear.

**Step 7 – Accept your offer**

If you are offered a place, you will need to accept it online within a specified timeframe.

**Step 8 – Enrolment**

If you have been offered and subsequently accepted a place you will receive enrolment information with further details in the mail.

### Application dates

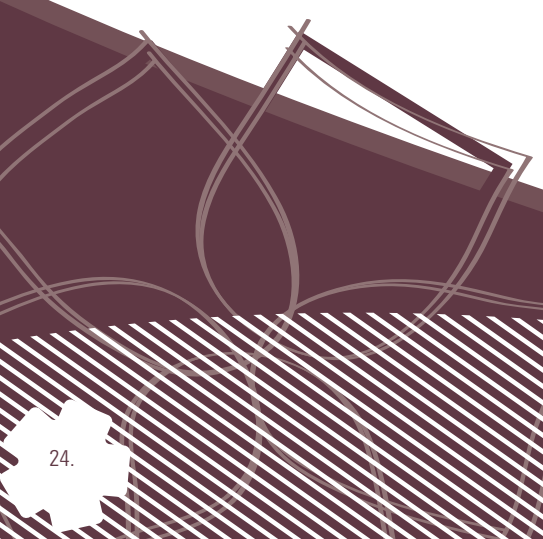
Applications for enrolment in Trimester 3, 2011 and Trimester 1, 2012 open in August 2011. Applications for Trimester 2, 2012 open in April 2012.

We encourage you to submit your application early because some courses have limited places or quotas. Applications received after the quotas have been filled for Trimester 1 commencement will be considered for a place in Trimester 2.

Some postgraduate courses have alternative application processes and closing dates. For more information, please visit **www.deakin.edu.au/apply**.

### For more information

Please visit our web site **www.deakin.edu.au/postgrad** or phone our customer service team on 1300 DEGREE (1300 334 733).



FOR MORE INFORMATION VISIT
**www.deakin.edu.au/apply**

## Research applications

To be eligible for admission to a masters by research, you must have completed an honours degree with a minimum second class result or other equivalent qualification.

To be eligible for admission to a PhD, you must have completed an honours degree with a minimum upper second class result, or a relevant masters degree that includes a research thesis component, or other equivalent qualification.

Undertaking a research degree requires the candidate to complete an approved program of research under the guidance of one or more supervisors within a time period. The supervisors will be experienced and active researchers with expertise in the field of study.

### Application process

#### Step 1 – Entry pathways

Demonstrated capacity to undertake significant research in your proposed field is needed. Depending on the type of research you want to undertake, this includes:

» completion of an honours degree
» completion of a research or coursework masters degree
» comparable qualifications from international universities
» relevant postgraduate research experience
» independently peer-reviewed journal articles, publications, or conference papers
» professional reporting or prior learning
» research related awards or prizes
» other evidence of research ability.

#### Step 2 – Find our research strengths

Search our web sites and publications or speak to the relevant School or Faculty to confirm that Deakin has the expertise to supervise your project.

#### Step 3 – Research proposal

Write a 300-word proposal to demonstrate a clear vision of what you want to study, why this is a topic of personal interest, and how you will approach the research question.

Postgraduate studies at Deakin enable you to expand your professional and social networks, and study with like-minded people who share similar interests.

#### Step 4 – Further documents

Other documents you are required to submit include:

» any published research – including the name of the publication and a copy of the contents and abstract pages.

Post a certified copy of:

» proof of Australian citizenship or permanent residency, or New Zealand citizenship (e.g. birth certificate, passport, citizenship certificate or visa)
» transcripts of all of your tertiary education studies except those undertaken at Deakin University
» proof of your start date and evidence of any intermissions or changes of candidature (e.g. from full time to part time) if you are applying to transfer a research degree from another institution
» proof of any name changes (e.g. marriage certificate).

#### Step 5 – Academic referees' reports

Confidential reports from two academic referees are required. Request reports from current or former lecturers, or academic or employment supervisors who are able to comment on your research expertise and potential.

#### Step 6 – Apply now

Once you have the relevant information register your application online. Visit **www.deakin.edu.au/research/admin/hdradmin/online-forms/hdr-application**.

#### Step 7 – Enrolment

If you have been offered a place you will receive enrolment information with further details via email.

### English language requirements

If your first language is not English, Deakin University reserves the right to seek further documentary evidence of English proficiency. For more information, please visit **www.deakin.edu.au/future-students/international/apply-entry/english-req**.

Please note, individual Faculties or Schools may have higher requirements. For more information, please phone 1300 DEGREE (1300 334 733).

### Application dates

Applications for candidature without scholarship may be made at any time. Applications for scholarships have deadlines. For domestic applicants (citizens and permanent residents of Australia, and citizens of New Zealand) the scholarship round closes at the end of October.

For more information visit **www.deakin.edu.au/future-students/research/scholarships**.

### For more information

If you are interested in a research degree, please contact:
Research Services Division
Phone: +61 3 9251 7124
research-hdr@deakin.edu.au
**www.deakin.edu.au/future-students/research**.

# Unit descriptions

### MLC703 Principles of Income Tax Law B X
*Trimester 2, 1 credit point*

The unit familiarises students with the principles underlying the Income Tax Assessment Act (ITAA 1936 and 1997) so that they have the necessary skills to successfully approach and research complex problems involving income tax issues. Topics include: the position and importance of income tax in the range of Commonwealth and state taxes; concepts of income and capital; deductions and exemptions; tax offsets; taxation of capital gains, fringe benefits and trading stock; taxation of companies; dividend imputation; taxation of individuals, partners, trustees and beneficiaries.

### MLM703 Chinese Commercial Law B X
*Trimester 2 (B, X and as part of a study tour to China, during mid-year break) or 3 (B, X), 1 credit point*

This unit enables postgraduate students to develop an understanding of the Chinese legal system and its relationship to Chinese history and culture, as well as to develop an awareness of Chinese commercial law in the context of conducting business with China, in particular, trading with and investing in China. The unit covers China's legal history and current legal system; signing foreign related contracts in China; law of joint ventures and 100 per cent foreign-owned enterprises; foreign trade law; protection of foreign intellectual property; labour and employment issues in foreign investment enterprises and dispute resolution.

### MLM720 Introduction to Commercial Law B X
*Trimester 1, 2 or 3, 1 credit point*

This is a foundation law unit designed for students who are embarking on one of the School's postgraduate programs who do not have a law degree (or equivalent). The unit focuses on various learning, research and communication skills that are needed in order to complete subsequent coursework units and research papers. It also introduces a number of substantive law areas.

### MLM721 International Competition Law and Policy B X
*Trimester 2, 1 credit point*

This unit introduces students to the law relating to the preservation of competition in the economies and internationally by examining the restrictive trade practices provisions of the Trade Practices Act 1974 and comparable legislation in the US, Europe and certain other jurisdictions. The theoretical underpinnings of those provisions and international developments are also examined. Topics include: evolution and goals of competition law; trade practices economics; restraint of trade; boycotts; anticompetitive agreements; price fixing; misuse of market power; exclusive dealing; resale price maintenance; mergers; authorisation, remedies and procedure; access; extra-territorial application; blocking and clawback legislation; international agreements on application and enforcement.

### MLM731 Corporations Law B X
*Trimester 2, 1 credit point*

This unit provides students with a basic knowledge of the regulation of companies by law under the Australian national corporations' legislation and related case law. Topics include: an introduction and historical background; characteristics of a corporation; types of corporation; the corporate constitution; corporate capacity and authority of those acting on a company's behalf; promoters; regulation of fundraising directors; shareholders; minority rights; share and loan capital; receivership; voluntary administration and deeds of company arrangement; and liquidation.

### MLM770 Law and the Internet B X
*Trimester 1 or 3, 1 credit point*

This unit introduces students to the regulatory challenges presented by the internet to more traditional areas of law such as contract, intellectual property and criminal law. In analysing these challenges, it draws on developments in foreign jurisdictions including the United States and Europe, and developments in international law. Topics include; history of the Internet, what it is and its underlying technology; the various services available on the Internet; how the internet differs from other forms of communication and publication; the competing interests implicated in issues of internet regulation; and how and why the Internet presents challenges to existing legal paradigms.

### MLM786 Electronic Crime B X
*Trimester 2, 1 credit point*

This unit addresses a range of issues relating to electronic crime, including: evolution of electronic crime; denial of service attacks; spreading of viruses; spamming; other forms of attack on computers; fraud; industrial espionage; money laundering; child exploitation; terrorism; harassment; and the computer as a storage device for a criminal offence.

### MLM788 International Financial Crime X (Intensive)
*Trimester 1, 1 credit point*

This unit aims to provide students with an understanding of the nature and complexity of international financial crime with a specific emphasis on the legal principles applying to key forms of financial crime. The unit will investigate the response of the international community to these crimes and explore representative examples of regulatory and corporate responses against these offences.

### MLM792 Anti-Money Laundering and Counter-Terrorism Financing X
*Trimester 2, 1 credit point*

This unit aims to provide students with an understanding of the key principles relating to international anti-money laundering (AML) and counter-terrorism financing (CTF) law. The unit investigates the concepts of money laundering and financing of terrorism with a particular emphasis on the development of the international legal framework to counter these activities. It analyses the international AML/CTF standards and considers aspects of their implementation in a number of developing and developed countries.

### MMH707 Managing Transitions and Change O
*Trimester 1, 1 credit point*

This unit provides a thorough grounding in current theory and the various approaches to change management. Topics include: understanding change; strategy and change; change intervention tools; new forms of organising; change leadership; HRM, the human dimension in organisational change; power and resistance; measuring and sustaining change.

KEY
B Melbourne Burwood Campus
F Geelong Waterfront Campus
G Geelong Waurn Ponds Campus
W Warrnambool Campus
X Off campus
O Online

### MMK733 Strategic Marketing B O
*Trimester 1, 1 credit point*

The unit provides a thorough examination of the two major aspects of strategic marketing. The first is the analytical framework for strategic market planning: the nature of strategic market planning; analysing market opportunity and competitive capability. The second major aspect examines managerial aspects of planning: defining the business; industries and their evolution; global marketing policy and planning systems; and organisation, implementation and control. The overall objective of the unit is to demonstrate the role of strategic marketing in creating sustainable competitive advantage.

### MMK737 Online Marketing B O
*Trimester 1, 1 credit point*

This unit examines and discusses the impact of the internet on marketing science and practice. Particular emphasis is given to the role of the World Wide Web in current and future integrated marketing communication, customer fulfilment strategy and customer relationship management.

### MMK751 Services Marketing B O
*Trimester 2, 1 credit point*

Service industries currently account for approximately 70–80 per cent of Australia's GDP and employ approximately 90–95 per cent of the workforce. It is anticipated that 90 per cent of all new jobs created during this decade will be in the service sector. Service organisations differ in many important respects from manufacturing organisations, requiring a distinctive approach to planning and implementing marketing strategy. This subject builds on the knowledge gained in Marketing Management by providing a detailed analysis of how to tailor marketing goals and strategies to service organisations. This is a highly practical unit that allows students the opportunity to apply theory to real-life situations on an ongoing basis.

### MPA701 Accounting B X
*Trimester 1, 2 or 3, 1 credit point*

This unit assumes no previous specific accounting knowledge and concentrates on financial accounting with the objective of students understanding the basic principles and procedures governing what and how information is processed. This includes an analysis of financial reporting outcomes to interpret what the outcomes reveal, together with any shortcomings of processes that may impact upon the quality of information presented. Students will make use of several software tools to facilitate learning, including a commercial accounting package, as part of the learning process.

### MPA702 Financial Interpretation B X
*Trimester 1 or 2, 1 credit point*

This unit aims to develop an understanding of how financial reports and other relevant information is used to support decision-making in and about organisations. It is designed to cater for students who do not necessarily have extensive prior business experience and therefore emphasises the business context and relates ideas to basic business transactions and other business functions and financial events. It also emphasises the environment within which businesses operate and discusses the use of important economic information that is normally beyond financial statements.

### MPC701 Information Systems for Business B X
*Trimester 1, 1 credit point*

This unit provides students with a thorough grounding in information systems for business. We explore ways information systems support business functions at all levels in organisations, from operations-level through to strategic decision making. Topics include: computer systems and networks, data and information, introduction to database management systems, knowledge management, decision support systems, enterprise resource planning, customer relationship management, supply chain management, eCommerce, and an introduction to systems development, security, privacy and ethics.

### MPC741 IT Strategy and Management B X
*Trimester 1, 1 credit point*

Virtually all business strategy now depends to some extent on effective Information Technology. This unit gives students the confidence to manage and work effectively with information systems (IS), the related enabling technologies, and IT professionals. The unit addresses IT strategy (including the links between IT strategy and organisational strategy); and considers advances in IT that enable increasing efficiencies, and new organisational initiatives. The unit also considers the structure, governance, and management of the IS function, and relationships with external suppliers and vendors. The goal is to equip students with the capacity to adequately plan for their organisation's use of IT to support, and sometimes shape, business strategy. This unit is primarily a strategy unit, not a technology unit.

### MPE707 International Banking and Finance B X
*Trimester 1 or 2, 1 credit point*

This unit will provide participants with the ability to identify the major issues associated with the globalisation of financial markets and to understand the functions of the international financial and banking systems. Topics include internationalisation of banking and finance, foreign exchange markets and the balance of payment accounts, international parity conditions, the international monetary system, exchange rate arrangements and government intervention, foreign exchange derivatives, foreign exchange exposure and management, international banking and global financial markets and country risk analysis and debt crisis.

### MPE711 Global Trade and Markets B X
*Trimester 1 or 2, 1 credit point*

This unit presents theoretical as well as applied research material covering a number of issues in the theory of trade and market development that are especially relevant for students of business economics. The theme of this unit is built on traditional international trade theory such as the theory of comparative advantage and terms of trade. However, it also explores interesting and relevant issues from fields of the political economy of trade and emerging markets to expand understanding of this traditional theory and understand its limitations. It covers topics such as transitions, migrations, government failure, the knowledge economy and privatisation. It emphasises a methodical understanding of what constitutes the international economic environment relevant for business.

### MPE781 Economics for Managers B X
*Trimester 1, 2 or 3, 1 credit point*

The unit covers the policy and strategic aspects of business management and also provides a practical and pragmatic approach to policy issues. Topics include the dynamics of market behaviour, including a discussion of different market structures and the impact of macroeconomic policies in a changing world economic environment on the economy in general and the student's business in particular.

# Unit descriptions

### MPF753 Finance B X

*Trimester 1 or 2 , 1 credit point*

This unit is designed as an introduction to the theoretical principles of finance and the practical requirements of financial management within for-profit organisations. The aim of this unit is to provide students with an understanding of the types of financial decisions that need to be taken in order to create value within the firm beyond that which shareholders could create on their own and in doing so ensure the long term sustainability of the firm. Students will develop analytical skills for making key financial management decisions, including simulation and real option analysis. It also includes investment, financing, risk management, capital structure and dividend decisions within the context of the Australian and international financial institutional frameworks. The unit will develop an ability to apply basic mathematics to solve real problems in finance. The principles and skills developed will be as relevant for those who are running their own small business as they are for senior finance managers within large companies.

### MPI700 Postgraduate Internship B X

*Trimester 1 or 2 , 1 credit point*

The Postgraduate Internship is designed to allow students to gain first-hand experience of graduate-level employment in an organisation. Students will work on a non-employment basis within an approved organisation for a minimum of two days per week for 12 weeks (or equivalent). It provides an opportunity to use the discipline-specific and generic skills learned earlier in their studies and to reflect on their own performance, the nature of professional work and the business context of the host organisation. This unit will help students refine their skills, build their confidence and increase their awareness of the requirements for successful professional business practice.

### MPK701 Research Design and Analysis B X

*Trimester 1, 1 credit point*

The unit will develop students' appreciation of the scope of research in business marketing, together with the processes and techniques used commonly in research. Topics include an introduction to research in marketing, problem definition, research design, qualitative and quantitative methods, measurement concepts, qualitative and quantitative data analysis, univariate and multivariate statistical analysis, sensitivity analysis, the development of business marketing models, reporting and presentation of results. Applications of research in business marketing in the areas of strategic analysis, pricing, brand management, consumer behaviour or sales forecasting will also be discussed.

### MPK712 Advertising and Consumer Behaviour B X

*Trimester 2, 1 credit point*

The intent of this unit is to develop students' understanding of the importance of consumer behaviour theory and research in the formulation and execution of marketing communications. Topics include consumer decision processes, factors influencing consumer behaviour (individual, psychological and environmental factors), brand positioning and marketing communications, campaign objectives, creative strategy, media strategy and other marketing communications (i.e. sales promotion, corporate image advertising, sponsorships, public relations, personal selling and direct marketing). A variety of marketing communications campaigns, from both profit and non-profit organisations, will be used to illustrate the interplay between consumer behaviour and marketing communications.

### MPK732 Marketing Management B X

*Trimester 1, 2 or 3, 1 credit point*

The unit consists of 11 modules built around the integrative nature of the marketing process and its role in achieving corporate objectives. Topics include the marketing process; the marketing environment; market research and information systems; segmentation; targeting and positioning; buyer behaviour, pricing consideration and approaches; integrated marketing communication; products and new product development; distribution; international marketing; marketing strategy and planning and the implementation and control of marketing programs. Emphasis is placed on the management decision-making process through the use of case studies. The unit not only introduces participants to core marketing concepts and techniques, but also encourages the application of these within the context of the participants' work environment.

### MPK736 International Marketing B X

*Trimester 2, 1 credit point*

The purpose of this unit is to examine the key elements in the formulation and implementation of international marketing strategy. The unit analyses the stages through which the firm moves in formulating its global strategy; initial entry; local market expansion; and global rationalisation. The formulation and implementation of strategy is discussed within the context of increasing interdependence of country markets and regional market integration.

### MPM701 Business Process Management B X

*Trimester 1 or 2, 1 credit point*

This unit provides foundation knowledge about the operational level of business activities and emphasises the importance of their links to organisational strategies. It considers the role of information and communication technologies in supporting business processes and it introduces enterprise systems and the ways in which these can automate procurement, fulfilment and production and the integration of these processes in organisations. The unit introduces business process architecture, problem scoping, modelling, methodologies and measurement. The unit prepares students to develop professional careers in industry, government, and the not-for-profit sector.

### MPM703 Business Strategy and Analysis B X

*Trimester 1 (B, X) or 3 (B), 1 credit point*

This unit introduces students to the role of business strategy in developing and sustaining competitive advantage. The broad aim of this unit is to equip students with an introductory knowledge of business strategy concepts and tools, together with an ability to apply this knowledge to a variety of macro environment, industry, and business situations.

### MPM721 Organisational Behaviour B X

*Trimester 1 or 2, 1 credit point*

Organisational behaviour refers to the systematic study of the attitudes and behaviours of individuals and groups in organisational settings. The purpose is to assist managers in predicting, explaining and controlling the behaviour of people in organisations. The unit establishes students' conceptual understanding of the dynamics of individual and group behaviour in organisations, to examine the ways in which different forms of organisational structure and leadership influence that behaviour, and to analyse the ability of organisations to respond to external change and to manage their own internal change processes.

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O Online

### MPM722 Human Resource Management
B X
*Trimester 2 or 3, 1 credit point*

The objective of the first section of this unit is to develop an understanding of strategic human resource management and the policies, methods and techniques utilised in human resource management functions with particular emphasis on the workplace. Specific attention is given to issues of recruitment, selection, human resources planning, human resources development, and managing for performance. The study and practice of human resources will develop skills and understanding of how human resources fit within processes of strategy formulation and organisational change. The focus is on Australian issues and solutions.

### MPM735 International Business Management B X
*Trimester 1 (B, X), 2 (B, X) or 3 (X), 1 credit point*

This unit covers the role and issues of management in the international environment. The principal aim is to provide participants with the requisite knowledge and skills that will enable them to manage in a complex and foreign business environment. The unit also provides an overview of the international economic, political, legal and cultural environments within which international businesses have to operate. The main thrust of the unit, however, is upon international business management strategy.

### MPP704 Research Project 4 B X
*Trimester 1 or 2, 4 credit points*

This unit is designed to enable students to undertake independent research, under the guidance of a supervisor knowledgeable in the research area, and to prepare a project report in a thesis format that contributes to the stock of knowledge in the research area. The supervisor must be a member of academic staff at Deakin University.

### MPT753 Finance (Study Tour)
*Trimester 3, 1 credit point*

This unit is an innovative experiential study of finance that focuses on sustainable investment. The objective of this unit is to provide students with the opportunity to engage with business, within the work place and in doing so develop practical and analytical finance skills by participating as a team member on a real work related project. The program begins with an intensive on-campus component of study that introduces the fundamental principles of finance and which develops the skill set necessary to undertake financial analysis of investments. Students then visit companies throughout regional Australia and in consultation with them assist in the identification of 'green initiatives' that could assist in reducing the company's carbon footprint. Students then return to the university and produce a consultancy styled report that analyses the financial viability of the investment opportunity. This report represents the major component of assessment for the unit.

### MPR721 Organisational Behaviour (Residential)
*Trimester 2, 1 credit point*

Organisational Behaviour focuses on the systematic study of the attitudes and behaviours of individuals and groups in organisational settings. The purpose is to assist managers in predicting, explaining and controlling the behaviour of people in organisations. The unit aims to develop students' conceptual understanding of the dynamics of individual and group behaviour in organisations; to examine the ways in which different forms of organisational structure and leadership influence that behaviour; and to analyse the ability of organisations to respond to external change and to manage their own internal change processes.

### MPR722 Human Resource Management (Residential)
*Trimester 2 (Residential), 1 credit point*

The objective of the first section of this unit is to develop an understanding of strategic human resource management and the policies, methods and techniques utilised in human resource management functions with particular emphasis on the workplace. Specific attention is given to issues of recruitment, selection, human resources planning, human resources development, employee relations and managing for performance. The study and practice of human resources will develop skills and understanding of how human resources fit within processes of strategy formulation and organisational change. The focus is on Australian issues and solutions.

### MPR732 Marketing Management (Residential)
*Trimester 3 (Residential), 1 credit point*

The unit consists of 12 modules built around the integrative nature of the marketing process and its role in achieving corporate objectives. Topics include the marketing process; the marketing environment; market research and information systems; segmentation; targeting and positioning; buyer behaviour, pricing consideration and approaches; integrated marketing communication; products and new product development; distribution; international marketing; marketing strategy and planning; and the implementation and control of marketing programs. Emphasis is placed on the management decision-making process through the use of case studies. The unit not only introduces participants to core marketing concepts and techniques, but also encourages the application of these within the context of the participants' work environment.

### MPT722 Human Resource Management (Study tour)
*Trimester 3, 1 credit point*

The objective of the first section of this unit is to develop students' understanding of strategic human resource management and the policies, methods and techniques utilised in human resource management functions with particular emphasis on the international workplace. Specific attention is given to issues of recruitment, selection, human resource planning, human resources development, and managing the performance. The study and practice of human resources will develop skills and understanding of how human resources fit within processes of strategy formulation and organisational change. The focus is on international and comparative issues and solutions.

### MPT735 International Business Management (Study tour)
*Trimester 3, 1 credit point*

This unit covers the role and issues of management in the international environment. The principal aim is to provide students with the requisite knowledge and skills that will enable them to manage in a complex and foreign business environment. The unit also provides an overview of the international economic, political, legal and cultural environments within which international businesses have to operate. The main thrust of the unit, however, is a focus upon international business management strategy.

### MSC703 Business Data Management B X
*Trimester 2, 1 credit point*

This unit examines the business context of information resource management and its activities within organisation and the implications of database systems for eBusiness. The unit also introduces database concepts, systems design and implementation; and includes the process of analysis and design of database systems and associated technical and administrative functions.

### MSC705 Information Systems Analysis and Design B X
*Trimester 2, 1 credit point*

This unit provides an introduction to the discipline of systems analysis and design. Students will learn two methods of analysis and design, a structured approach and an object orientated approach, for designing business information systems. Students will also learn how to gather information from businesses, investigate solutions and undertake feasibility studies.

# Unit descriptions

### MSC712 Advanced Systems Analysis and Design B X

*Trimester 2, 1 credit point*

The unit aims to build on skills and competence developed in MSC705. The unit is about methods, frameworks and methodologies that can be used for Information Systems development. In the unit a range of techniques will be considered along with several contemporary methodologies which will include Rapid Application Development, Soft Systems Methodology and ETHICS. The current industry use of methodologies will be examined and evaluation paradigms will be presented to provide a framework where any methodology can be assessed for its suitability.

### MSC752 eBusiness Strategies B X

*Trimester 1, 1 credit point*

This unit examines the important themes and contemporary issues in eBusiness strategies. It aims to help students develop practical skills in formulating, implementing and evaluating eBusiness strategies, as well as conducting critical analysis of eBusiness models. The unit places special emphasis on understanding how organisations generate, derive and share business value from eBusiness in a real life business context. In examining contemporary issues in eBusiness, the unit explores how modern organisations are leveraging social networking, blogs, virtual worlds, mobile computing and various Web 2.0 applications for next generation eBusiness.

### MSC753 eBusiness and Supply Chain Management B X

*Trimester 2, 1 credit point*

The growing global economy has redefined the dynamics of competition for modern organisations. With product lifecycles shortening and worldwide commercial competition increasing, success depends on adopting state-of-the art, effective global supply chain management (SCM) approaches. This unit provides students with an understanding of how eBusiness technologies and applications can be used to develop world class supply chain networks. It covers the concepts and principles of SCM, the essential eBusiness technologies used to support supply chain operations and the strategies used to put in place best practice global supply chain networks.

### MSC754 Information Systems Business Analysis B X

*Trimester 1, 1 credit point*

The unit takes a high-level view of IS development where the focus is on the strategic alignment of IS and business functions in an organisation, which involves planning and discussion of business needs, as well as, negotiation and specification of solutions required by the client organisation, and agreed upon by management. Such solutions often involve development of information systems, and may also include business process improvement, organisational change, and strategy and policy development. The unit therefore covers the principles and practices of stakeholder analysis, identification of business needs, problems and opportunities, analysis, negotiation and specification of requirements for any solution that may involve technology inspired change. The unit will address critical issues in acquiring, modelling, validating and communicating requirements for large business systems. Tutorial and online exercises will allow students to develop practical hands-on skills in effective acquisition of information from client groups by brainstorming, interviewing, conducting workshops and meetings.

### MSC755 Risk Management for Business Information Systems B X

*Trimester 2, 1 credit point*

Global trends in business information systems outsourcing and electronic business highlight the need for companies to understand and manage a wide variety of information systems and information technology (IT) risks including IT services risks, IT project risks, and electronic business risks. This unit explores eight classes of risk for contemporary business information systems. Students will learn and apply key strategies and techniques for managing a wide range of information systems risk classes. The unit examines the risks within a framework of information systems governance, standards and audit.

### MSC756 Project Management B X

*Trimester 1, 1 credit point*

Project Management is undoubtedly one of the most important skills in management as modern organisations shift from traditional management to project based management. This unit examines project management in the exciting, dynamic, innovative, virtual, information enabled, and knowledge intensive organisational environment. Consequently, this unit emphasises skills as well as techniques that can be derived from traditional project management and explores innovations relevant for the successful management of projects.

It also investigates the task of managing project knowledge which is regarded as a central skill for managing future projects. The project management methodology taught in this unit is based on the Project Management Body of Knowledge (PMBoK). Topics covered in this unit include: overviews of project management; the virtual context; planning processes; project communication; human and social aspects of project management; procurement tools; techniques and enabling technologies.

### MSC767 Business Security Management B X

*Trimester 1, 1 credit point*

The aim of the unit is to ensure the introduction of students to the design, management and security implications of business systems. A supporting aim is to show the way security is strongly linked to an organisation's strategic direction. The unit will focus upon security from a technology, management and policy aspect.

### MSC768 Knowledge Management B X

*Trimester 1, 1 credit point*

This unit provides an understanding of the key principles and practices involved in managing individual, group and organisational knowledge in organisations. Students will gain an understanding of the key advantages and disadvantages of different knowledge strategies, processes, technologies and systems. The human aspects of knowledge management, such as the motivation to share knowledge, will be carefully considered. Students will learn how to evaluate knowledge management in organisations and will be able to make appropriate recommendations for improvement. The unit will also address the alignment of knowledge management strategy with other important corporate strategies and processes.

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### MSC769 Information Systems Infrastructure B X

*Trimester 1, 1 credit point*

This unit familiarises students with the essential infrastructure components of an information system. Topics covered include electronic communication principles; local and wide area network operation; operating systems; fundamentals of programming; database systems; and client/server computing.

### MSC770 Information Systems and Global Issues B X

*Trimester 2 (B, X) or 3 (B, X and as part of a study tour to India), 1 credit point*

This unit explores some of the key ethical, social and professional issues facing business and information systems professionals and employees in their work. The rise of global eBusiness have made significant changes in the way people, businesses and other organisations operate and new ethical, social and professional issues have emerged. More recently we have seen a rise in corporate scandals and the financial meltdown. The key aim of this unit is to equip students with the skills to identify, analyse and report on these issues. The unit will consider some of the key ethical and social issues that have arisen as a result of global eBusiness and addresses topic issues which in recent years has include: privacy and email, freedom of speech and work, whistle blowing, cyber-terrorism and 'piracy and intellectual property'.

### MSC795 eBusiness Processes B X

*Trimester 2, 1 credit point*

Many organisations are streamlining their business processes through electronic channels to strengthen their performance and competitive position. With the advent of global networking, the net-enhanced organisations and supply chains are increasingly playing an important role in the national economy as well as in international business. This unit examines a range of concepts, management challenges, and tools for the adaptation of business processes in eBusiness settings, reflecting the most recent trends in the application of information technology for business.

### MSQ791 Data Analysis for Managers B X

*Trimester 1 or 3, 1 credit point*

This unit covers the process of data analysis including the collection, presentation, and interpretation of data. A principal objective of the unit is to demonstrate the importance of understanding data and the crucial role of data analysis in business decision-making. While it is essentially a statistics-based unit (including survey methods and questionnaire design), mathematics and arithmetic calculations are kept to a minimum. The emphasis of the unit is on the interpretation and applications of the various techniques studied. Extensive use is made of software to develop data analysis skills and to enhance the appreciation of statistical techniques in a management context. Qualitative research methods, and their role in the overall research and design process, are also briefly covered.

### SIT701 Internet Core and Enterprise Routing B

*Trimester 1, 1 credit point*

This unit focuses on the technologies used in constructing a modern network and the routing used within those networks to ensure that data is delivered. In this unit students will learn about the number systems and the mathematics of networks, networking media including installation and testing, cabling of LANs and WANs, operation of Ethernet/IEEE 802 networks, fundamental concepts of switching and routing, subnetting and the TCP/IP model. Students will undertake a study of static routing and dynamic routing protocols. Distance vector and link state routing protocols are considered, and the operation and configuration of RIP, EIGRP, and OSPF protocols are examined in detail. Through practical laboratories students will learn how to construct such networks using Cisco equipment; in particular students will learn how to connect Cisco routers and switchers and to configure routers to operate effectively on a TCP/IP network.

### SIT702 Advanced Network Design and Engineering B

*Trimester 2, 1 credit point*

On completion of this unit students will be able to plan, design and configure both local area networks and wide area networks. They will gain thorough knowledge of switching basics and routing concepts and practical knowledge of the use and configuration of network elements such as routers and switches. Students will also be able to effectively administer both local area networks and wide area networks. Topics covered include: hierarchical LAN design for switched Ethernet networks; interconnection elements such as hubs, switches and routers; switching concepts and configuration; the spanning tree protocol and virtual LANs; wireless LAN operation, configuration, and security; WAN design; the point to point protocol (PPP); frame relay; network security and firewall configuration; broadband networks; IPv6; and network troubleshooting. The unit also covers advanced networking concepts such as optical networking, converged networking, virtual private networks, reliability, security and quality of service.

### SIT703 Advanced Digital Forensics B X

*Trimester 2, 1 credit point*

This unit discusses the various options open to organisations to assist them in investigating problems and attacks on their computer systems. A theoretical framework is constructed which enables an organisation to systematically document, analyse and solve identified issues. Legal concerns around identifying and reporting criminal acts are also mentioned.

### SIT704 Advanced Topics in Digital Security B X

*Trimester 1, 1 credit point*

This unit deals with current topics in digital security including integration of security infrastructure across systems, managing malicious software, and international approaches to system security.

# Unit descriptions

### SIT717 Advanced Data Mining B X

*Trimester 2, 1 credit point*

The unit will begin with an introduction to the standard data mining processes such as CRISP-DM, then explain the requirements of business intelligence, in the context of customer relationship management. Methods to be taught in this unit includes variants of association rule discovery (for basket analysis); prediction techniques such as inductive inference of decision trees and Bayes models (for market prediction), clustering techniques such as self-organisation maps (for market segmentation), but with emphasis on real world applications. A selection of recent real world business intelligence case studies will be incorporated in this unit to illustrate the introduced techniques.

### SIT725 Advanced Software Engineering B X

*Trimester 2, 1 credit point*

This unit covers advanced approaches of applying software engineering to web application development, such as web application formulation and planning, analysis and design models, relationship between UML models and web application designs, and web application testing. The unit will also cover other advanced topics and methodologies in software engineering, as well as recent developments.

### SIT735 Communications Network Security B X

*Trimester 2, 1 credit point*

This unit aims to provide students with theoretical knowledge and practical training in communications network security. The unit explores concepts and issues pertaining to network security; examines methods and technologies for securing communications network systems; and network security standards. Threat models and vulnerabilities of communications networks as well as mechanisms to circumvent or defend against these attacks are discussed. Cryptographic protocols and practices for communications networks are explained.

### SIT737 Service Oriented Architectures and Technologies B X

*Trimester 1, 1 credit point*

This unit explores the rationale behind the move towards service oriented architectures (SOA) and enabling service oriented technologies. This unit develops in students an understanding of the 'service', the fundamental building block of service oriented architectures. The principles of service design that are required to build a truly service oriented solution logic to achieve the strategic goals associated with SOA and service oriented computing are areas of strong focus within this unit. Students will also be exposed to SOA enabling technologies (such as web services) to put into practice their theoretical knowledge through SOA solution design and application development. In addition the fundamentals of distributed computing with particular emphasis on parallel application development will be addressed.

### SIT751 Java Network Programming B X

*Trimester 1, 1 credit point*

This unit focuses on network applications including its design and development in a Java programming environment. Students will learn about the Java programming language as well as skills to develop networked applications using the language and libraries that supported it. Students will begin with an overview of the programming language to see its similarities to other modern OO languages. They are then introduced to basic Java development through the Java applet before students move on to more complex application development requiring an understanding of both low level Java networking facilities such as sockets, web URLs and datagrams, and higher level object-oriented networking such as web services and CORBA. To extend the capability of network programming, other related topics will also be introduced.

### SIT763 IT Security Management B X

*Trimester 1, 1 credit point*

This unit provides students with a broad view of security policies, models, and mechanisms for confidentiality, integrity, and availability. Topics include operating system models and mechanisms for mandatory and discretionary controls, data models, concepts and mechanisms for database security, basic cryptography and its applications, security in computer networks, web applications and distributed systems and control and prevention of viruses and other rogue programs.

### SIT764 Project Management B G X

*Trimester 1, 1 credit point*

This unit uses the project management body of knowledge (Project Management Institute 2001) framework to present project management in an information systems context. The unit covers project management processes and integration, project scope, time, cost and quality management, risk management, project teams and resources. It also covers areas such as procurement (outsourcing), project communication and documentation.

### SIT771 Object-Oriented Development B X

*Trimester 1, 1 credit point*

This unit introduces students to designing software by exploring in detail the development of software designs from a problem statement using the techniques of object-oriented analysis and design. The resulting designs are expressed in UML notation. Topics covered include designing systems with data abstraction, data encapsulation, inheritance, generalisation and specialisation, object-oriented analysis and design techniques, design by contract, design and reusability, and the role of software engineering concepts for managing software development. This unit introduces the concepts of programming languages and object-oriented programming, and provides practical experience in the development of object-oriented programs. The unit examines in detail the relationship between the design of an object-oriented system and its implementation. Concepts covered include language syntax and semantics, classes as templates for objects, method development, implementation of class relationships, constructors and destructors, polymorphism, dynamic memory management, error detection and handling, testing and debugging, terminal and file input/output, and programming modules. In addition to developing new software, students will gain experience in testing, debugging and maintaining existing systems. Professional and ethical issues directly related to the topic are addressed during the unit study.

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### SIT772 Database and Information Retrieval B X

*Trimester 2, 1 credit point*

The unit will cover two important foundational but related methods for capturing, representing, storing, organising, and retrieving structured, unstructured or loosely structured information. Firstly, the unit will develop an understanding of the fundamentals of data modeling and of database technology. The relational data model will be presented and the functionality provided by implementations of it will be studied. The process of constructing database tables and related entities will be explored in depth. Secondly, we will develop the understanding of information retrieval: the process of indexing and retrieving text documents. The field of information retrieval includes almost any type of unstructured or semi-structured data. Information retrieval is a critical aspect of Web search engines. We will provide students with an intuition for how search engines work, why they are successful, and to some degree how they fail.

### SIT773 Software Design and Engineering B X

*Trimester 1, 1 credit point*

In this unit, students will be introduced to the broad-based concepts of how systems are designed. As to any successful systems, analysis and design is the essential step. Of course, applying the right design methodology also contributes to the success of the system. Therefore, this unit will investigate the different methodologies for different types of systems, including procedural, object-oriented, and real-time systems. In each type of system, the issues will be discussed and shown how a specific methodology addresses them. This appreciation is important in many analyst roles in real life. In fact, there is a big demand for analysts who understand all aspects of information systems in the context of the organisation's business operations. Such analysts are often sought after in major IT consultancy firms.

### SIT774 Web and Internet Programming B X

*Trimester 2, 1 credit point*

In this unit, we introduce the internet, the web and Java. We also introduce the techniques of creating web content using HTML, XML and JavaScript, and discuss how web servers and browsers provide functionality. The unit focuses on the web and internet programming. Topics include client-side and server-side programming. We briefly introduce basic internet services such as FTP, Telnet, email, news etc. as well as web authoring and programming with editors and converters. HTML is included, covering HTML basics, layout, hypertext links, images, multimedia, image maps, tables, frames, forms, and CGI scripts to design home pages. Finally, we present the future of the internet and the web. Professional and ethical issues directly related to the topic are addressed during the unit study.

### SIT775 IT Services in Organisations B X

*Trimester 1, 1 credit point*

In this unit students will study the role of IT services in organisations, and current strategic IT issues. The unit explores strategic management and planning for information technology, competitive advantage, information management, and critical success factors and information resource planning. Professional and ethical issues directly related to the topic are addressed during the unit study. In addition, IT consultancy skills will be developed. These topics will be studied with the use of case studies with some online resources.

### SIT780 eSystems Software Development B X

*Trimester 1, 1 credit point*

The unit explores internet technologies for esystems software development such as, the use of XML schemas including DTD and XSD in creating XML documents, models of distributed computing in the high-level design of esystems, XML web services which is a significant paradigm in distributed computing and the role of open standards, such as SOAP and WSDL, for the development of web services. Methods for the publishing and consuming of web services in B2B systems and the role of content management systems and content delivery systems in esystems and the role of application layer protocols will also be addressed. In addition, there will be a major focus on server-side technologies for esystems such as PHP, J2EE and .net with an emphasis on components development. Security issues in esystems will also be identified. On completion of this unit, students will be able to identify key aspects of esystems and gain practical experience in the use of technologies for the design and development of effective esystems.

### SIT782 Practical Project B X

*Trimester 1, 2 or 3, 1 credit point*

This unit is to complete a research and development project which utilises the analysis, design, development and project management skills which the student has acquired through their studies. The emphasis of the assessment is quite varied, depending upon the type and objectives of each project. The student will be required to fully document all aspects of the project. This unit is normally the final unit to be completed in the Master of Information Technology.

### SIT783 Linux and Open Source Software B X

*Trimester 2, 1 credit point*

In this unit students will learn how to apply Linux and open source software in the creation of network routers and firewalls, file servers, web servers, and other network servers. The unit will examine installation and configuration of the Linux operating system, its kernel, basic Unix commands and administration, software deployment, network configuration, DHCP, DNS, firewall setup, file systems and their configuration, NFS, Samba, printing, Apache, PHP, MySQL, mail services, security, and licensing.

# Unit descriptions

### SIT784 Mobile and Ubiquitous Computing B X

*Trimester 2, 1 credit point*

This unit aims to provide students with theoretical knowledge and practical training in mobile and ubiquitous computing. The unit explores the technologies which will be used and the issues that must be faced when computer devices become more mobile and ubiquitous. The characteristics of mobile and pervasive applications and the networking technologies that enable them will be discussed. Fundamentals of mobile operating systems, data management, location tracking and context awareness are discussed. Issues such as energy, security and user interface design are discussed. A research project in an area related to mobile or ubiquitous computing is a fundamental party of the unit.

### SIT790 Research Project B X

*Trimester 1 or 2, 4 credit points*

Students will be required to undertake an approved study plan related to their individual research interests. This plan will also conform to the following guidelines: literature review in preparation for research; presentation of research colloquia (2); participation in School research seminars throughout the program; completion of a significant piece of research and submission of a research dissertation on this work. A supervisor will be appointed in consultation with the student to provide guidance and assistance in the conduct of the research. Students may also seek technical advice from any member of staff. Students will be encouraged to work with industry, if appropriate, in undertaking their research project. This unit is normally the final unit to be completed in the Master of Information Technology (Professional).

### SIT791 Professional Practice B

*Trimester 1 or 2, 4 credit points*

This unit is a professional placement which utilises the analysis, design, project management, and communication skills which the student has acquired through their studies. The emphasis of the assessment is varied, depending on the type and objectives of each internship arrangement, including assessment of students' skills on problem analysis, problem solving and project management. Students are expected to spend at least four days a week in their industry placement.

### SIT792 Research Project Part A B X

*Trimester 1 or 2, 2 credit points*

Students will undertake an approved study plan related to their individual research interests. This plan will conform to the following guidelines: literature review in preparation for research; two presentations of research colloquia; participation in school research seminars throughout the program; completion of a significant piece of research; and submission of a research dissertation on this work in the following trimester in SIT793. A supervisor will be appointed to provide guidance and assistance in the conduct of the research, but students may also seek technical advice from any member of staff. Students will also be encouraged to work with industry, if appropriate, in undertaking their research project. The student must continue research under SIT793, to gain credit and complete the Master of Information Technology (Professional).

### SIT793 Research Project Part B B X

*Trimester 1 or 2, 2 credit points*

Students will continue the work commenced in SIT792, culminating in submission of a research dissertation.

### SIT794 Services Management B X

*Trimester 2, 1 credit point*

The growth and globalisation of services requires a rethink of services management strategies. This unit is the cornerstone unit of the IT services specialism and introduces an inter-disciplinary approach to services management and the development of the critical skills required to succeed in a services-led economy. Students will develop an understanding of the 'science' of services with topics addressed including, the role of services in the economy, the nature of services and the service strategy. The design and management of service enterprises and service operations are covered with particular emphasis on the role of technology in services and service entrepreneurship. In addition, capacity planning and queuing models and the management of capacity, demand and waiting lines will be discussed. This unit aims to bring together ongoing work in computer science, operations research, business strategy, management sciences and social and cognitive sciences and will include detailed case studies and relevant theoretical perspectives including the latest developments in services science.

Students making the most of Deakin's library resources.

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### SIT795 Information Technology Industry Study Tour B G

*Trimester 3, 1 credit point*

The Industry Study Tour is designed to give students an opportunity to explore firsthand the use and organisation of Information Technology in government and business. The unit will be run during Trimester 3 in intensive mode over a three week period with students being taken on site visits to a range of organisations as well as a number of workshops on campus to provide background information in preparation of the visits. Students will be offered some choice with regard to the visits they undertake to allow them to create a unique portfolio of visits that fit a theme of interest. In addition to a tour, each site visit will include a presentation of a guest lecture from an IT professional on the particular expertise in focus and a question and answer session led by the students.

The two week program will include the following:

» in-house and outsourced IT services
» IT businesses versus IT as a business support service
» technologies and paradigms in action, in particular areas of specialisation of the School such as IT security, networking, games development and multimedia technologies
» IT risk management
» overview of the IT industry in Victoria and government and professional associations that support the industry.

### STP701 Internship Information Technology B G X

*Trimester 1, 2 or 3, 1 credit point*

This unit enables students to complete a 12 day minimum industry placement within a relevant Information Technology organisation. Students will be required to undertake a body of work giving them an opportunity to experience first-hand the day-to-day work environment as an IT professional, learn about the wide range of career outcomes available to IT graduates and apply what you learnt in the classroom to an actual working environment. Each student will be assigned an academic supervisor and an industry supervisor during the placement period. The comprehensive assessment system includes maintaining a logbook and writing a report.

### STP702 Internship Information Technology B G X

*Trimester 1, 2 or 3, 1 credit point*

This unit enables students to complete a 12 day minimum industry placement within a relevant Information Technology organisation. Students will be required to undertake a body of work giving them an opportunity to experience first-hand the day-to-day work environment as an IT professional, learn about the wide range of career outcomes available to IT graduates and apply what you learnt in the classroom to an actual working environment. Each student will be assigned an academic supervisor and an industry supervisor during the placement period. The comprehensive assessment system includes maintaining a logbook and writing a report.

# Find out more

## Where to get more information

### Web site

Deakin on the web, **www.deakin.edu.au**, contains detailed information on everything at Deakin, including:

» courses
» unit descriptions
» student profiles
» campuses
» facilities and services
» applications and scholarships
» research.

To find detailed course information, including unit descriptions, you can go visit the following sites:

» Course search – search for Deakin's courses online **www.deakin.edu.au/courses**, find the course you are looking for and view a full description of that unit
» *Postgraduate Studies Handbook* – the handbook provides a listing and description of all units and course structures **www.deakin.edu.au/handbook**.

### Other useful web sites

Fees
**www.deakin.edu.au/future-students/fees**

Library
**www.deakin.edu.au/library**

Research scholarships
**www.deakin.edu.au/future-students/research/scholarships**

Study skills
**www.deakin.edu.au/future-students/services-facilities**

### Course enquiries

For additional course guides and brochures or more information about application, selection and enrolment, as well as fees and charges, please contact:

1300 DEGREE (1300 334 733)
enquire@deakin.edu.au
**www.deakin.edu.au/courses**

### Research degree enquiries

Research Services Division
Phone: +61 3 9251 7124
research-hdr@deakin.edu.au
**www.deakin.edu.au/research**

### Disability services

For details, phone:

» Geelong 03 5227 1221
» Melbourne 03 9244 6255
» Warrnambool 03 5563 3256

visit **www.deakin.edu.au/disability** or email drcentre@deakin.edu.au.

### International student enquiries

Deakin University also produces course guides specifically for international students. To request a copy phone Deakin International on +61 3 9627 4877, email deakin-international@deakin.edu.au or visit **www.deakin.edu.au/international**.

### Further reading

Postgraduate study area booklets:

» Architecture and Built Environment
» Arts, Humanities and Social Sciences
» Business and Law
» Education
» Engineering
» Health
» Information Technology
» Media, Communication and Creative Arts
» Medicine
» Nursing and Midwifery
» Nutrition and Dietetics
» Optometry
» Psychology
» Science and Environment.

To request a copy of any of the above publications please email enquire@deakin.edu.au, phone 1300 DEGREE (1300 334 733), or download at **www.deakin.edu.au/future-students/brochures**.

## Open Days 2011

**Warrnambool Campus**
Sunday 14 August

**Geelong Waurn Ponds Campus**
Sunday 21 August

**Geelong Waterfront Campus**
Sunday 21 August

**Melbourne Burwood Campus**
Sunday 28 August

**www.deakin.edu.au/openday**

## Social media@Deakin

You can find us on social media sites Facebook, Twitter and YouTube using the links on our social media page.

Keep in-the-know about all things Deakin, including upcoming events and general information, and have your questions answered.

We also have an iTunesU channel, where you can learn about our research activities, teaching and learning initiatives and view highlights of student work, training guides and videos of public lectures.

Visit **www.deakin.edu.au/socialmedia** to get connected with Deakin.

## Postgraduate Information Nights

**RACV Club, Melbourne**
Tuesday 4 October 2011, 5–7 pm

**Melbourne Burwood Campus**
Tuesday 11 October 2011, 5–7 pm

Postgraduate Information Nights will also be held in February and May 2012. Please visit **www.deakin.edu.au/postgrad** or phone 1300 DEGREE (1300 334 733) closer to the time for specific dates and event details.

# Important dates

## 2011

**14 August**
Open Day at Warrnambool Campus

**21 August**
Open Day at Geelong Waurn Ponds Campus
Open Day at Geelong Waterfront Campus

**28 August**
Open Day at Melbourne Burwood Campus

**4 October**
Postgraduate Information Night, 5–7 pm
RACV Club, Melbourne
To register visit **www.deakin.edu.au/pgevents**.

**11 October**
Postgraduate Information Night, 5–7 pm
Melbourne Burwood Campus
To register visit **www.deakin.edu.au/pgevents**.

**31 October**
Closing date for applications for research scholarships – Australian and New Zealand citizens and Australian permanent residents.

**14 November**
Trimester 3 begins

### Application closing dates

| **Trimester 3, 2011** | **Trimester 1, 2012** |
|---|---|
| 30 October 2011 | 19 February 2012 |
| Off campus | Off campus |
| 6 November 2011 | 26 February 2012 |
| On campus | On campus |

Note: Research degree applications can be made at any time. Some postgraduate courses have alternative application requirements and closing dates. For more information, please visit www.deakin.edu.au/apply.

## 2012

**Trimester 1**
Teaching period 5 March–1 June
Easter holiday/intra-trimester break 6–15 April
Examination period 7–15 June
Trimester break 18 June–6 July

**Trimester 2**
Teaching period 9 July–5 October
Intra-trimester break 24–30 September
Examination period 11–19 October
Trimester break 22 October–9 November

**Trimester 3**
Teaching period 12 November–15 February 2013
Intra-trimester break 24 December–2 January 2013
Examination period 21 February–1 March 2013
Trimester break 4–8 March 2013

For details, please visit **www.deakin.edu.au/future-students**.

**More information**
1300 DEGREE (1300 334 733) | www.deakin.edu.au | enquire@deakin.edu.au

# 2011
## DEAKIN UNIVERSITY
# POSTGRADUATE INFORMATION NIGHTS

**RACV CLUB, MELBOURNE**
Tuesday 4 October 2011
5.00–7.00 pm

Level 2, 501 Bourke Street
Melbourne VIC 3000

**MELBOURNE BURWOOD CAMPUS**
Tuesday 11 October 2011
5.00–7.00 pm

Building LB, 70 Elgar Road
Burwood VIC 3125

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**www.deakin.edu.au**