2016 POSTGRADUATE INFORMATION TECHNOLOGY

Melbourne | Geelong | Warrnambool | Cloud (online)

DATA SCIENCE
INFORMATION TECHNOLOGY
IT SECURITY
SOFTWARE AND SERVICES
INFORMATION SYSTEMS
RESEARCH DEGREES
IT is an essential component to innovation and productivity across a wide range of sectors, as well as being at the very centre of the way we work, learn, communicate, socialise and entertain ourselves. With an industry that is thriving, postgraduate studies in information technology will open up a wealth of opportunities for your future career.
Professional recognition
Professional accreditation by the Australian Computer Society (ACS) means your degree is recognised in industry, resulting in stronger job outcomes. Deakin’s IT courses give you the option to study units that lead to Cisco certification, giving you a relevant, practical qualification, as well as an advantage over other graduates when applying for jobs.

Maintaining relevance
Deakin recognises the importance of being closely aligned with industry and maintains strong links through IT representatives from leading organisations such as IBM, Telstra, ANZ and Computershare. These industry representatives provide us with curriculum advice, keeping our courses current and relevant to industry needs, which is key in a sector where change is constant.

Gain industry experience
As a Deakin IT student you have the opportunity to apply for internships or industry placements related to your area of study, as part of your course. Industry placements provide you with real-world work experience that is highly valued by today’s employers and can give you a critical edge in a competitive global job market.

Modern facilities with the latest technology
Deakin continually invests in its facilities and IT programs, ensuring you have access to the latest software and technologies in fully equipped computer labs from day one of your course.

Flexible learning
Deakin offers flexible learning options. Most programs can be studied at our Melbourne-based campus, full-time, part-time, as well as via cloud (online) learning, giving you the flexibility to fit your studies around your lifestyle, work and other commitments. Deakin’s trimester system also allows you to fast track your studies and complete your program within a shorter timeframe.

Courses at postgraduate level cover cloud computing, analytics, mobile application development, social networks and computing and security. Our courses are informed through active and ongoing industry connections and provide work-integrated learning experience and industry-based learning, ensuring graduates are work-ready and globally capable.
WHAT CAN I STUDY?

Information technology
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 Master of Information Technology offers the flexibility to specialise in IT security, IT services, networking or software development, in addition to obtaining a broad grounding in IT.

The Master of Information Technology (Professional) is designed to extend the specialised information technology skills obtained in the Master of Information Technology by providing you with the opportunity to undertake a trimester of industry-based learning or a trimester of research under the supervision of Deakin researchers.

Graduate Certificate of Information Technology
Graduate Diploma of Information Technology
Master of Information Technology
Master of Information Technology (Professional)

Information systems
Deakin’s information systems programs have 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.

Graduate Certificate of Information Systems
Graduate Diploma of Information Systems
Master of Information Systems

Master of Science (Research)
The Master of Science (Research) is a unique course offering comprising a combination of coursework and research. This advanced degree program prepares you for a career in industry and can serve as a pathway between undergraduate studies and a PhD.

The first year of the course includes units related to the specialisation of your choice, and is focused on research training and methods. The second year of the degree comprises a research thesis in an area of interest to you that is completed over two trimesters.

Three information technology specialisations are available depending on your research interests and career aspirations.

SPECIALISATIONS
IT security
Cyber issues have attracted enormous attention, both in terms of every day issues such as internet banking and internet ’scams’, through to cyber-terrorism and cyber-warfare. This specialisation gives you the opportunity to explore your interests in information and network security, security management and digital forensics while developing the advanced skills required to manage and secure data, communications and infrastructure.

Software and services
Explore current and emerging trends in the analysis, design and implementation of complex and large-scale software systems using methodologies, tools, techniques and principles relevant to industry. You will have opportunities to explore advanced software engineering, business intelligence and service-oriented architecture to develop the skills needed in a services-led economy.

Graduate Certificate of Information Systems
Graduate Diploma of Information Systems
Master of Information Systems

Data science*
The data science specialisation provides students with a solid background and advanced working knowledge in data science and analytics, covering everything from basic skills of data munging and visualising relationships in data to building sophisticated descriptive, prescriptive and predictive models.

* The data science specialisation will be offered from 2017.

Networking
Plan, install 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 students 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.

Master of Information Technology
Master of Information Technology (Professional)

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.

Master of Information Technology
Master of Information Technology (Professional)

SCHOLARSHIPS
At Deakin, we believe everyone should have the option of going to university. There is an array of scholarships available to students through Deakin and other parties, including the Australian Government.

For a full list of scholarship opportunities and information on how to apply, please visit deakin.edu.au/study-at-deakin/scholarships-and-awards.
DEAKIN CRACKS WORLD’S TOP 50 YOUNG UNIVERSITIES

Deakin has continued its climb up the Times Higher Education (THE) list of the world’s top 100 universities under 50 years old, cracking the top 50 for the first time.

Deakin has been ranked number one in Victoria, number six in Australia and number 45 in the world.

The news confirms Deakin’s rise in the ranks of the very best young universities worldwide, after prestigious international university rankings organisation Quacquarelli Symonds (QS) last year listed Deakin at number 50 on its Top 50 under 50.

Vice-Chancellor Professor Jane den Hollander says at only 40 years young, Deakin owes its continuing success to a strong vision for the future and its wonderful staff, researchers, students, communities and partners.

‘In the past two years, Deakin has leapt 21 places from 66 to 45 in the list of the top 100 universities under 50 years old,’ Professor den Hollander says.

‘Times Higher Education says younger universities are bullish and “they have no fear of the future or of older rivals” – and I couldn’t agree more. Deakin is ready to drive the innovation that will create the jobs of the future.’

IT services

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, operation research, business strategy, management sciences, social and cognitive sciences and the legal sciences to develop the skills needed in a services-led economy.

Master of Information Technology

Master of Information Technology (Professional)

Business analytics

The study area introduces students to a range of internationally recognised business intelligence and analytics tools and has a very strong practical focus. Big data concepts and issues are integrated across the curriculum and you have access to a wide range of state-of-the-art business analytics software tools, such as IBM Cognos, SAS Enterprise Miner, Microsoft Excel and Tableau. You also have direct access to analytics certification programs offered by IBM, Microsoft and SAS.

Master of Information Systems

eBusiness and social media strategies

The mass adoption of social media, the advances of new technologies and the accumulation of large amounts of data has made information central to many aspects of work and life. In addition to learning about broad business-oriented principles and practices of information systems, the course also allows students to specialise in eBusiness and social media.

Master of Information Systems

For more information about these courses, including fees, duration and prerequisites, please see page 10 or visit: deakin.edu.au/information-technology/research or deakin.edu.au/business/information-systems-business-analytics.

Hear what our researchers have to say about research in the School of Information Technology.

Visit: deakin.edu.au/sebe/itres
RESEARCH IN INFORMATION TECHNOLOGY

The School of Information Technology is committed to the generation of fundamental knowledge, high quality research training and assisting industry to advance technology to maintain a competitive edge.

Research areas
The School of Information Technology offer research opportunities in the following areas:

- Artificial intelligence
- Data analytics
- Information and network security
- Distributed systems
- Communication networks
- Multimedia systems
- Bioinformatics
- Intelligent machines
- Digital forensics
- Service and cloud computing.

The School of Information Technology strongly values its association with the following Strategic Research Centres: Pattern Recognition and Data Analytics (PRaDA) and Centre for Intelligent Systems Research (CISR).

Pattern Recognition and Data Analytics Strategic Research Centre (PRaDA)
PRaDA focuses on the discovery of patterns in large-scale data. While PRaDA advance theory across a range of statistical methods – from linear algebra to probabilistic techniques – they remain grounded in real world problems. They are data domain agnostic and have projects in areas as diverse as surveillance, social media and pervasive health.

The PRaDA research team was the driver behind the start-up iCetana’s innovative anomaly detection software. The software uses ideas from compressed sensing to enable simultaneous surveillance of many cameras deployed in diverse settings. A local city council has used our algorithms to detect loitering, anti-social behaviour and traffic violations.

Centre for Intelligent Systems Research Strategic Research Centre (CISR)
The Centre for Intelligent Systems Research (CISR) investigates and develops state-of-the-art algorithms and methodologies that provide practical solutions to real world problems that are encountered by systems operating with uncertainty, variability and change. This practical approach is complemented by research on next generation robotic control systems and force emulation methodologies that improve process reliability, product quality and operator safety in complex environments.

With funding from the Australian Research Council, The Department of Defence and numerous industry partners, CISR has been able to equip five research labs with state-of-the-art equipment, including mobile robots, industrial robots, haptic devices (the largest number of devices in the Southern hemisphere), thermal imaging systems, optical imaging systems, rapid prototyping machines, super computers and suites of process simulation software.

LEARN FROM LEADING IT EXPERTS
The School of Information Technology vision is to carry out world-class research that makes a difference, and to educate and train the information and knowledge technology graduates of the future who are ready to contribute in jobs that make a difference. For instance, Professor Yong Xiang is the lead researcher on a project to find the keys to lock out digital music pirates through a newly developed method that doesn’t compromise the quality of files. The team has developed a new watermarking process that leaves a trail of who has illegally distributed a file, without affecting the quality of the original audio.

LOOKING TO THE FUTURE
The School of Information Technology is firmly focused on the future needs of industry. We expect the emerging importance of service-oriented, cyberphysical and intelligent systems and the adoption of the National Broadband Network will have a major impact on the information technology industries within the next 10 years. Our focus now is to continue building our capabilities in this exciting intersection of cross-disciplinary fields.
BIG DATA IN HEALTH
Deakin has partnered with Max Healthcare to focus on data analytics for healthcare management in India.

In what will be a ‘first of its kind’ venture, both partners will put ‘big data’ to work across a large array of medical records – including admissions, diagnosis and computerised registries – with the aim of identifying critical safety issues and assisting clinical efficiencies.

The director of Deakin’s Pattern Recognition and Data Analytics Strategic Research Centre, Professor Svetha Venkatesh explains that the outcomes are critically important, from economic, patient safety and systems perspectives.

The immediate project will focus on heart disease, specifically on patients with symptoms of Acute Myocardial Infarction (AMI) or stroke. ‘The primary objective of the report will be to search through the existing data sets for hidden patterns of both the predictable and preventable events in managing the healthcare of individuals,’ says Professor Venkatesh.

‘This will be done by building sophisticated predictive models, utilising machine learning techniques derived from anonymised hospital patient records from diverse hospital data sources. This paradigm is novel, since it is capable of both hypothesis generation and testing, while being agnostic and unbiased from prior assumptions.’

Professor Venkatesh is optimistic that the model will prove useful for managing other health issues and could improve general hospital healthcare practices in India.

The resultant model will be jointly held and shared by the teams at Deakin and Max Healthcare, as a prototype program. Once successful, the model would be subsequently piloted at Max Healthcare on prospective cases over a one-year period and the predictive accuracy will be calculated and shared with Deakin.

For more information about research in information technology and information systems visit: deakin.edu.au/information-technology/research or deakin.edu.au/business/information-systems-business-analytics.

ALISSA MACLEAN
MASTER OF INFORMATION TECHNOLOGY

‘When I was in year 11 during high school, I participated in a workshop run by Deakin for high school students who were interested in doing IT when they went to university. I spent a week getting to know people at Deakin and I really enjoyed the atmosphere and getting to use different technology than what I had been exposed to at school. I decided then that Deakin would become my top choice for university regardless of the course. I finished my undergraduate degree and moved straight into postgraduate studies in IT!’
STUDY OPTIONS AND APPLICATIONS

Study options
We provide a range of options and choices to allow your postgraduate study to suit your needs:

• If you’re studying via cloud (online) learning, you really can study anywhere or any time. Our use of the cloud means you don’t have to attend a campus to have a rich, interactive, personal and empowering learning experience.

• If you do choose campus learning, our four campuses in Melbourne, Geelong (Waterfront and Waurn Ponds) and Warrnambool, give you plenty of options.

• Life can change very quickly and what suits you one year, might not the next. That’s why many courses give you the option to switch between full-time and part-time study, as your needs shift.

• With more than 150 postgraduate courses, there’s plenty to choose from at Deakin. Many courses also give you the flexibility to tailor your studies to your interests and aspirations through your choice of elective subjects.

• We can help you fast-track your degree through our trimester system. Deakin has three trimesters, with an optional trimester over the summer, which means that for some courses you can study year-round and complete your degree sooner.

deakin.edu.au/study-at-deakin/study-options-and-pathways/flexible-study-options

Credit transfer and recognition
Credit transfer and recognition is credit granted towards your Deakin course for relevant approved study or work experience. There are two aspects to credit transfer and recognition:

• credit may be transferred to your Deakin course from completed or partially completed studies you have undertaken at other accredited institutions

• credit may be granted on the basis of knowledge and skills acquired through uncredentialled learning.

deakin.edu.au/study-at-deakin/apply/credit-for-prior-learning

FOR DOMESTIC STUDENTS

How to apply
Coursework applications
To apply for a postgraduate coursework degree you will usually need to have completed an undergraduate degree; however, there are other pathways. If you have considerable work or life experience, in some instances you may be able to use this to obtain admission into a graduate certificate or graduate diploma course. You may then progress to a master’s degree subject to University approval.

Research applications
Deakin offers three types of research degrees: Masters by Research, Doctor of Philosophy (PhD) and Doctor of Psychology. 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. Supervisors are experienced and active researchers with expertise in the field of study.

Application dates
Applications for coursework degrees commencing in Trimester 3, 2015 and Trimester 1, 2016 open in August 2015. Applications for Trimester 2, 2016 open in April 2016. Some postgraduate courses have alternative application processes and closing dates. Applications for research candidature without scholarship may be made at any time.

FOR MORE INFORMATION ON HOW TO APPLY AND APPLICATION DATES
Coursework degrees –
deakin.edu.au/study-at-deakin/apply
Research degrees –
deakin.edu.au/study-at-deakin/apply/apply-for-a-research-degree
General enquiries –
1300 DEGREE (1300 334 733).
Deakin Research –
phone +61 3 9251 7124,
email research-hdr@deakin.edu.au,
visit deakin.edu.au/study-at-deakin/research-degrees-doctoral-and-masters
Deakin International –
email study@deakin.edu.au,
visit deakin.edu.au/international

STUDENT COMPUTING REQUIREMENTS
There are certain computing requirements students must meet in order to successfully study at Deakin. For more information, please visit deakin.edu.au/study-at-deakin/apply/computer-requirements.
FOR INTERNATIONAL STUDENTS

English language requirements

English is the language of instruction and assessment at Deakin. As an international student you will need to demonstrate your English language ability to be eligible to enter the Deakin degree program of your choice.

There are two options available for international students to meet the English language requirements for their degree program:

Option 1 – You have completed previous studies in English (conditions apply)*

Option 2 – You received a high enough score on an approved English language test*. The Courses at Deakin table in this booklet provide you with the minimum IELTS scores needed for the degree program of your choice.

For a list of approved English tests and scores, as well as further information about Deakin’s English language requirements, please visit deakin.edu.au/study-at-deakin/international-students/apply/step-3-check-you-meet-the-entry-requirements/english-language-requirements.

* Applicant’s previous studies or English language test results must have been within the last two years to meet Deakin’s English language requirements.

Deakin University English Language Institute (DUELI)

Do you need help meeting Deakin’s English language requirements? Or do you want to improve your English as a study skill before starting your degree? DUELI can help you improve your English and prepare you for study at Deakin.

DUELI is part of Deakin University

DUELI is more than an English language centre – it is part of Deakin University. As a DUELI student you have full access to all of Deakin’s facilities and services. This includes libraries, health and counselling services, as well as Deakin’s sport facilities.

The DUELI advantage

DUELI is recognised as one of the best English language centres in Australia. As part of Deakin, DUELI will do more than improve your English. DUELI will give you the chance to improve your study skills and become familiar with studying at an Australian university.

For more information about DUELI, please visit deakin.edu.au/study-at-deakin/international-students/deakin-university-english-language-institute.

How to apply

Once you have chosen a degree and checked all entry requirements, applying to study at Deakin is simple.

When can I apply?

Applications for international students are open all year. There are three trimester intakes for which you can apply – March, July and November – depending on your chosen course.

How do I apply?

Once you have organised all the necessary documentation, you can submit your application using one of the following methods:

Applying online

To apply online, visit applicantportal.deakin.edu.au/connect/webconnect for online application portal.

Applying by mail or email

After completing the relevant application forms you can either mail or email your application to Deakin International.

Applying in person

Deakin has a number of offices around the world to apply in person. You can visit the Deakin International.

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Other costs

Other costs you will need to pay are living costs (food, accommodation, etc.) and course-related expenses, such as computer equipment, books, field trips and special equipment or clothing (if applicable to your course).

Deakin is home to over 8000 international students from around the world.
### COURSES AT DEAKIN

<table>
<thead>
<tr>
<th>Coursework</th>
<th>CODE</th>
<th>YEARS FT*</th>
<th>CAMPUS</th>
<th>TRIMESTER OPTIONS*</th>
<th>2016 FULL FEE-PAYING COST*</th>
<th>2015 INDICATIVE CSP COST*</th>
<th>IELTS*</th>
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<tr>
<td><strong>Graduate Certificate of Information Technology</strong></td>
<td>$578</td>
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<td>T1, T2</td>
<td>$12 640</td>
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<td><strong>Graduate Diploma of Information Technology</strong></td>
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<td>2</td>
<td></td>
<td>T1, T2</td>
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<td>–</td>
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<td>1 PT†</td>
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<td>T1, T2, T3</td>
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<td>T1, T2, T3</td>
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### Research

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<tr>
<th>Coursework</th>
<th>CODE</th>
<th>YEARS FT*</th>
<th>CAMPUS</th>
<th>TRIMESTER OPTIONS*</th>
<th>2016 FULL FEE-PAYING COST*</th>
<th>2015 INDICATIVE CSP COST*</th>
<th>IELTS*</th>
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<td><strong>Master of Science (Research)</strong></td>
<td>$820</td>
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<td><strong>Doctor of Philosophy</strong></td>
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Information correct at July 2015. Deakin University reserves the right to alter, amend or delete course offerings and other information listed.

* Fees quoted are for Australian domestic students and are based on a typical enrolment in one year of full-time study. They should be used as a guide only and are subject to change.

** Fee-Paying Place (FPP): 2016 annual course fees for FPPs are set, as shown in the FPP column. These are based on an annual full-time study load, regardless of your unit selection. Commonwealth Supported Place (CSP): The CSP rates shown in the CSP column are indicative 2015 annual course fees. CSP fees are indicative because they are calculated based on your unit selection. 2016 indicative CSP course fees will be available in late 2015 pending the outcome of the Commonwealth Government’s proposed fee deregulation and reforms – please visit deakin.edu.au/fees for the most up-to-date information.

† Course lengths may vary in response to requirements within the Australian Qualifications Framework. Applicants should refer to the handbook for the latest information, deakin.edu.au/handbook.

‡ IELTS is the International English Language Testing System. The IELTS scores in the table above reflect the minimum overall score required as well as the lowest score allowed for any band (overall score/lowest band score).

§ Specialisations are not available at all campuses. Please visit deakin.edu.au/study-at-deakin/find-a-course/information-technology for further information.

* Availability of units may be limited in Trimester 3.

δ International students should note that, due to visa regulations, this course can only be undertaken while living outside Australia.

For international course fee information, please visit deakin.edu.au/fees.
Talk to us
For all general enquiries, phone 1300 DEGREE (1300 334 733) or email myfuture@deakin.edu.au.

Go online
Deakin on the web contains detailed information on everything at Deakin, deakin.edu.au.
See also:
deakin.edu.au/study-at-deakin/find-a-course/information-technology
deakin.edu.au/information-technology/research
deakin.edu.au/business/information-systems-business-analytics

Connect with us
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twitter.com/Deakin
youtube.com/user/DeakinUniversity

Visit us
For information on Deakin’s postgraduate information events, visit deakin.edu.au/deakin-events.

Further reading
Download our range of study area booklets and course guides at deakin.edu.au/course-guides.