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Careers in IT

Choosing a career in IT means entering a growth industry where graduates are in high demand locally and internationally.

There is a critical shortage of IT professionals in Australia. The Clarius Skills Index for the March quarter of 2012 found that there was a shortage of more than 5,500 ICT professionals in Australia. By embarking on an IT career you will enter an industry that is crying out for skilled professionals. You will have a wealth of well-paid and exciting job opportunities both within Australia and internationally. Your IT career could see you:

- fueling discovery and advancement in all aspects of society – business, entertainment, health, government, and the community
- enabling other disciplines to leap forward by connecting, organising and analysing information
- tackling major problems and creating solutions that transform society.

You will work in all kinds of settings, from your own start-up company to global businesses, from government to not-for-profit organisations.

The Melbourne School of Information

The Melbourne School of Information (MSI) brings together IT programs from across the University, and provides a gateway for you to find information, make enquiries and apply for study in IT programs offered at the University. For all queries about IT study options, start at the MSI website www.msi.unimelb.edu.au

You will create software and information systems, unlock the meaning and value in data and information, and shape the ways people and technology interact. With a career in IT you can make an impact in all kinds of ways.

Why study IT at Melbourne?

At Melbourne, you prepare for a career, not just your first job.

- Melbourne is ranked top in Australia and 25th in the world in IT and Engineering (Times Higher Education World University Rankings, 2011-12). The 2012 QS World University Rankings by subject place Melbourne first in Australia and 21st in the world for Computer Science.
- Melbourne is the most exciting technology hub in the country, home to many of the brightest teaching and research minds in the field.

- IT at Melbourne is grounded in both science and engineering, brought to life through creative thinking and practical application.

Studying IT at Melbourne will provide you with:

- skills and knowledge that are globally portable, adaptable across industries and environments, and will not be outdated by changes in technology
- deep foundations that create highly-valued, in-demand employees and researchers
- the flexibility to pursue your passions and to work on exciting projects with other high-performing students
- the ability to work across fields, contributing to the advancement of science, business, health and more.

What kind of IT are you?

I love playing with technology. I develop my own apps and plugins for fun and I want to make this my career.

MIT Computing

I'm interested in how IT helps us navigate our world; enabling better transport, faster emergency responses and new ways to meet friends.

MIT Spatial

I want to use technology to help doctors do their jobs better and make hospitals more efficient.

MIT Health

There's a universe of data out there and I want to harness it - to help people access the data they need where they need it, across all devices.

MIT Distributed

I'm a digital entrepreneur. I want to work with world leaders in digital business, revolutionising organisational processes with technology.

MIS

I'm into gadgets. I'd like to build a robot that's going to change the world.

Master of Engineering (Mechatronics)

I'm inspired by the complex software underlying Google and want to be a part of something just as ambitious.

Master of Engineering (Software)

I'm interested in what's beyond the horizon. I want to lay the foundations for technologies that are still in the realm of science fiction.

Master of Science (Computer Science)

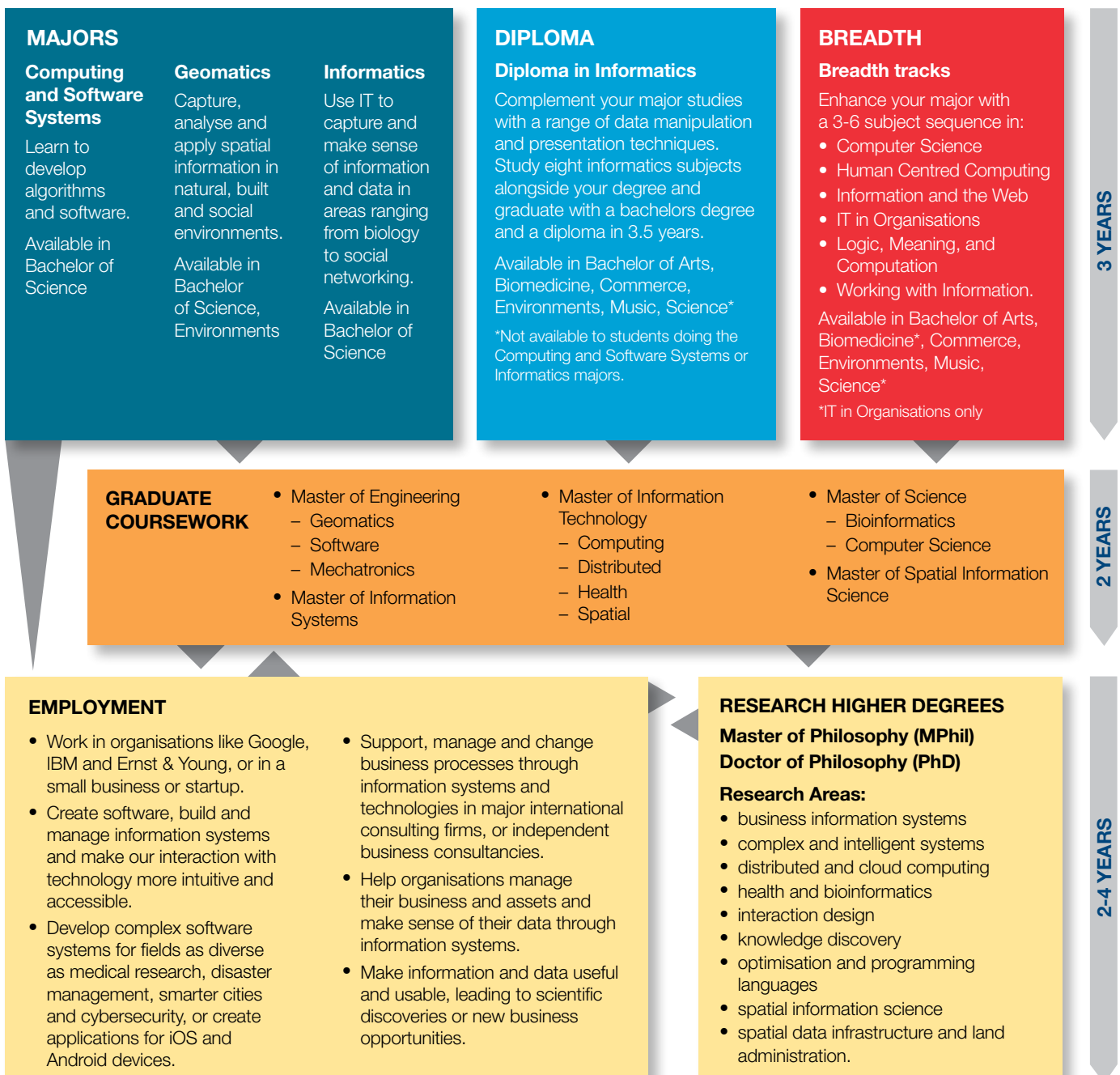
Undergraduate study options

Melbourne degrees offer flexible options to incorporate IT into your undergraduate program. You can study a lot of IT or a little:

- the three IT majors in the Bachelor of Science (BSc) provide outstanding pathways to professional graduate study and to a career in IT
- breadth study in IT enhances your non-IT major with highly practical and academically challenging studies that will boost your career opportunities
- the Diploma in Informatics can be studied alongside your core degree giving you the tools and skills to take your major discipline further.



UNDERGRADUATE STUDY



IT Majors

Information Technology is offered through three undergraduate majors: Computing and Software Systems, Geomatics and Informatics.

Computing & Software Systems

The Computing and Software Systems major is designed for technically focused students who want to develop strong professional capabilities in programming and software development. In this major you will:

- develop high-level technical expertise
- build proficiency and expertise with a variety of programming platforms
- understand the systematic processes underpinning software development
- appreciate the principles of computing.

You will be able to find jobs in a wide variety of industries, applying your understanding of computer science, design, engineering, management, mathematics and psychology as part of a team producing large software systems.

This major provides a pathway to the following graduate programs:

- Master of Engineering (Software) and Master of Engineering (Mechatronics) – two year programs
- Master of Information Systems
- Master of Science (Bioinformatics)
- Master of Science (Computer Science)
- Master of Spatial Information Science
- Master of Information Technology (Computing, Distributed, Health or Spatial)

Geomatics

Geomatics is the science and technology that captures, manages, analyses and provides spatial information about the natural, built and social environments. Geomatics lies behind search and rescue efforts, GPS, Google Earth and mobile location-based services, and transparent and accountable governance to fight poverty or corruption.

In this major, you will learn about:

- mapping sciences
- geographical information systems
- remote sensing
- land administration
- surveying.

You will be able to pursue global careers in surveying, geographical information systems (GIS), environmental management and computing in business and government organisations.

This major provides a pathway to the following graduate programs:

- Master of Engineering (Geomatics) – two year program
- Master of Information Systems
- Master of Spatial Information Science
- Master of Information Technology (Spatial)

The Geomatics major is also available in the Bachelor of Environments.

Informatics

Informatics is about using computers to work with digital information – gathering, using, storing, retrieving, and visualising information and data. Informatics integrates knowledge and concepts from computing, information modelling, human-computer interaction and graphics to unlock the power of information in all types of settings, including health, finance and economics, engineering and communications.

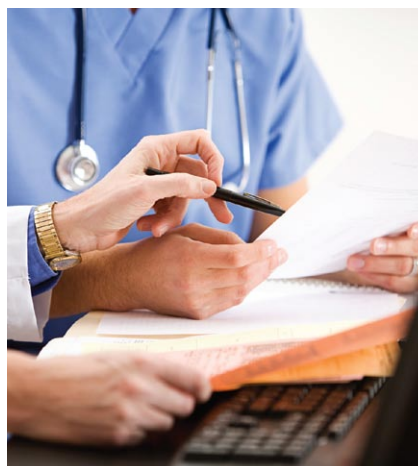
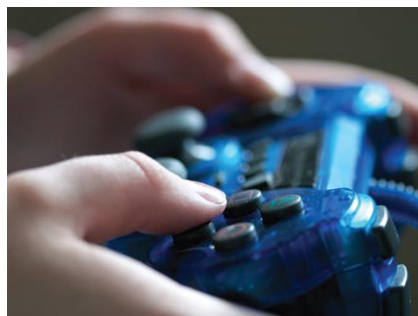
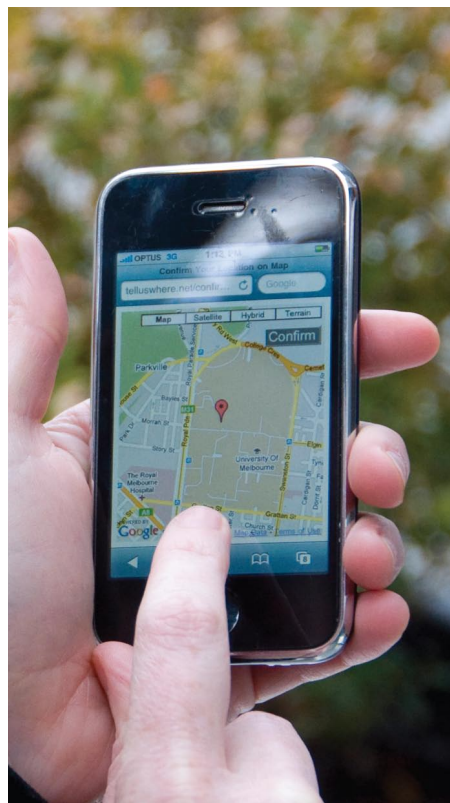
In the Informatics major you will:

- learn tools and technologies to solve information-related problems in a range of application areas
- develop programming skills
- design web-based solutions
- develop the skills to work effectively in multi-disciplinary teams.

You will be able to work in finance, economics, biology, geology, chemistry, engineering, health, communications and social media settings.

This major provides a pathway to the following graduate programs:

- Master of Information Systems
- Master of Information Technology (Computing, Distributed, Health or Spatial)
- Master of Spatial Information Science
- Master of Science (Bioinformatics)



Entry requirements: Bachelor of Science:

VCE Units 3 and 4:

- A study score of at least 25 in English/English Language/Literature or at least 30 in ESL
- At least 25 in Mathematical Methods and at least 25 in one of Biology, Chemistry or Physics
- The minimum ENTER for 2013 is 85 (guaranteed for international students).

International Baccalaureate (IB):

- English, Standard Mathematics and one of Biology, Chemistry or Physics.
- The minimum IB Diploma score for 2013 is 31 (guaranteed for international students).

Applicants who have undertaken other equivalent qualifications must ensure they have completed subjects equivalent to the pre-requisite VCE subjects.

IT as breadth

Melbourne degrees let you enhance your career opportunities by taking IT subjects as breadth studies alongside your core degree.

You can select from these sequences of 3-6 subjects:

- **Computing**

Explore the technical foundations of IT, including computer programming and the design and implementation of software systems.

- **Human Centred Computing**

Explore the interactions between the Internet, rich visualisations and people, leading to practical skills in presentation and human-centred design tasks.

- **Information and the Web**

Gain skills for managing, manipulating, and sharing information on the web, as well as designing human-centric information systems.

- **Information Technology in Organisations**

Learn the foundations of IT management with a focus on the role of IT in achieving business and organisational goals.

- **Logic, Meaning and Computation**

Explore issues relating to logic, meaning and computation from a multidisciplinary perspective.

- **Working with Information**

Gain skills and knowledge about how to structure, manipulate, visualise and analyse both simple and complex data.

Students enrolled in the Bachelor of Arts, Commerce, Environments and Music may take any of these breadth tracks.

Students enrolled in the Bachelors of Biomedicine or Science may only take the Information Technology in Organisations breadth track.

Diploma in Informatics

Complement your major studies with the Diploma in Informatics to equip yourself with the IT knowledge that employers seek.

In this Diploma you will:

- learn tools and technologies to solve information-related problems in a range of application areas
- develop programming skills
- design web-based solutions
- develop the skills necessary to work effectively with people in other disciplines.

Informatics opens up career opportunities in finance, economics, biology, geology, chemistry, engineering, health, communications and social media.

The Diploma adds one semester to a normal three-year degree, allowing you to graduate with a degree and diploma in 3.5 years.

The Diploma in Informatics provides

a pathway to the following graduate programs:

- Master of Engineering (Software)
- Master of Information Systems
- Master of Information Technology (Computing, Distributed, Health and Spatial)
- Master of Science (Bioinformatics)
- Master of Spatial Information Science.

Sam Stewart

Sam Stewart is in the final year of his Bachelor of Science, majoring in Informatics. Sam has recently returned from Silicon Valley, as part of the Advance Program (www.advance.org), supporting young Australian innovators. He has recently launched his own start-up company, Nightfly Services, a social media mobile app that allows users to plan their nightlife by recommending nearby venues. Sam has also been accepted into a graduate role as an Information Security Consultant with PricewaterhouseCoopers.

"A couple of years ago as Social Secretary for my college, my job was to organise the social lives for over 130 people. I kept getting the same questions over and over again, such as "Hey... where should I go... what's good... what's cheap tonight?" I knew there had to be a better way. I'm a massive nerd, I major in Informatics and I knew that I could hack something together that would answer these questions."

"The trip to Silicon Valley was an amazing learning experience for me. I was surrounded by the smartest people I've ever had the privilege of meeting. There are some crazy geniuses over there. As a result, Nightfly received some valuable critical feedback."



Graduate study

Graduate study in IT at Melbourne will make you an information technology professional. It will deepen your knowledge, expand your career options and enable you to make discoveries that benefit society. You can enter graduate study directly from an undergraduate pathway or after a period in the workforce.

As a graduate student, you will:

- be taught in small classes with more flexible study options
- benefit from professionally-focused and specialist programs that are regularly updated to adapt to new applications
- gain exposure to industry through guest lectures, industry based projects and internships
- engage with staff who are well-connected to international research communities.

There is strong demand for our creative, adaptable and technically-adept graduates to work both locally and globally.

Master of Information Technology (MIT)

The MIT will offer you the lifelong technical skills to devise solutions to the problems of today and those of tomorrow.

The Master of Information Technology (MIT) is a new program for creative students who are passionate about cutting edge technology and its applications in solving real world problems across all areas of business, government, health and society.

The program teaches the fundamental adaptable technical skills that are applicable across a range of IT platforms; skills that will not date, such as applied algorithmics, data mining, distributed computing and programming language design. This allows our graduates to evolve with and adapt to the swift pace of technology.

As industry continues to be transformed by IT, a new workforce with transferrable problem-solving skills is in high demand. The MIT is closely aligned with industry and includes competitive enrolment in a 25 point industry placement with a leading employer.

The MIT is available in four specialisations focused on areas of growing importance in technology, business and government.

Research pathways are available to students wishing to undertake further research via a Master of Philosophy or PhD program.

Master of Information Technology (Computing)

The MIT with a specialisation in Computing offers students the most flexible option for attaining transferrable technical and problem-solving skills for a career at the leading edge of technological innovation.

You will work across disciplines and learn how to design, analyse, implement and evaluate IT projects and future needs in the changing context in the ICT industry.

Major strands of study include:

- IT project and change management
- Software development
- Programming languages
- Artificial intelligence
- Software design.

Graduates can pursue senior IT and network positions such as data analyst, business analyst, database developer, web developer, mobile app developer and system programmer.



Associate Professor Tim Baldwin

Associate Professor Tim Baldwin is the Academic Program Coordinator of the Master of Information Technology.

His research interests cover topics including deep linguistic processing, multiword expressions, deep lexical acquisition, computer-assisted language learning, information extraction and web mining.

Prior to his current role, he was a Senior Research Engineer at Stanford University's Center for the Study of Language and Information.

"The Master of Information Technology is a flexible, practical course offering graduates the deep, technical tools to solve problems across domains. The course has strong industry links, and you will have the opportunity to take part in our placement program, giving you a foot in the door with leading employers in the IT sector.

You'll be in the midst of an exciting technology precinct working with world-class innovators in areas such as eHealth, cloud computing, spatial information and application programming."



Master of Information Technology (Distributed Computing)

As the world experiences an exponential growth in high speed broadband and distributed storage and computation, an increasing demand for cloud computing and the need to access large quantities of data quickly and efficiently, experts are required to manage these complex networks. The MIT with a specialisation in Distributed Computing is designed for graduates who will play a leading role in providing service-oriented large-scale computing systems and applications that will operate over wired and wireless networks.

You will develop cloud computing solutions, devise innovative broadband applications, and work on team projects applying distributed computing technologies to e-science and e-business.

Major strands of study include:

- Mobile computer systems programming
- Cloud computing
- High performance computing
- Distributed algorithms
- Parallel computing

Graduates find senior roles in web services, e-business, cloud computing, mobile systems programming and sensor networks, working as project leaders, network analysts, mobile applications developers and more.

Master of Information Technology (Health)

The MIT with a specialisation in Health is a program for students who want to use their technical expertise to create IT solutions in the healthcare and medical sphere. Every aspect of healthcare analysis is being driven by IT, yet the experts needed to innovate and drive these complex systems are in critically short supply.

As a MIT (Health) student, you will be in the midst of the most exciting health technology precinct in the southern hemisphere, alongside world-leading medical researchers and cutting edge technology such as Australia's greenest supercomputer, the IBM Blue Gene/Q.

Major strands of study include:

- eHealth and biomedical informatics
- Information systems in health
- Health record management
- Biomedical and clinical data and knowledge

Graduates are in high demand worldwide in the health sector and are able to secure senior roles in active patient monitoring, data and image processing for health care, information management and eResearch. They work as clinical analysts, systems analysts, business managers and IT project managers in healthcare.

Master of Information Technology (Spatial)

Spatial information is all around us; from GPS to Google Earth, to mobile location-based social media applications such as foursquare.

The MIT with a Spatial specialisation will prepare you for a career in the spatial information industry, one of the fastest-growing IT sectors in the world.

As a MIT (Spatial) student you will learn to analyse, communicate and visualise spatial information in all its forms.

Major strands of study are:

- Spatial databases
- Spatial programming
- Interaction with users of spatial services

Plus electives in:

- Satellite positioning
- Remote sensing, and more...

Current industry shortfalls in spatial information practitioners combined with a growing demand in Australia and internationally, ensure graduates a range of well-paid job opportunities. Graduates can find work as disaster management experts or as designers of mobile location based applications and games. Further graduate roles include working with GPS to manage transport and infrastructure challenges and working as policy advisors to governments and NGOs.



Master of Information Systems (MIS)

The MIS is a premier professional degree for aspiring and current practitioners who aim to be IS/IT leaders. It is available to mid-career or start-of-career graduates from any study background. The program covers skills areas of critical importance to IT employers, such as project and change management, emerging technologies, IT strategy and governance and compliance, security and service provision.

MIS graduates are highly-regarded by top firms and government agencies searching for tomorrow's digital business thinkers and leaders. Graduate jobs include roles such as management consultant, systems analyst/designer, IT infrastructure manager, business analyst and data architect.

The MIS is:

- Designed in consultation with leading IT decision-makers, making it among the most industry-relevant graduate Information Technology programs in Australia
- A one-year, 18-month or a two-year full-time program depending on your work experience and undergraduate qualification. Part-time study is available, as are two pathway programs
- Accredited by the Australian Computer Society and qualifies graduates for international membership of the Association for Computing Machinery and the Association for Information Systems.

In this program you will:

- Develop abilities in supporting, managing and changing business processes through information and communications technology and information systems
- Gain transferrable skills in solving business problems, collaboration, project management and application of models, frameworks and management theory
- Have the opportunity to tailor your electives to your career priorities.

Research pathways are available to students wishing to undertake further research via a Master of Philosophy or PhD program.



“The Master of Information Systems is our premier graduate course for digital business professionals and future IT leaders. It was designed in consultation with senior industry figures, in response to the skills they advised us that they are looking for in their graduates. As a result, the Master of Information Systems offers highly transferrable and industry-relevant skills across areas such as change and project management, business analytics, IT service provision and consulting, and IT innovation.”

Dr Wally Smith

Academic Program Coordinator,
MIS

Nicole Dial

Originally from the USA, Nicole Dial was working as a Data Analyst for two years before she decided it was time to undertake further study abroad. She chose the Master of Information Systems, a course she said has been vital in providing her with career direction. Most recently Nicole was offered an internship at Management Consulting Firm DB Results, via the MIS work experience program. As a result of the internship, Nicole has now been offered an ongoing role at DB Results with the hope that it can transition to a permanent role upon graduation.

“Taking up the internship was one of the best decisions I’ve ever made because I really enjoy my company.”

“I think internships and other student opportunities allow you to align what you’re learning in academia with the practical side of things. There is something about being in a real world environment that allows you to take those scenarios and experiences that you see happening in real time and apply it to your theory.”



Master of Engineering

Our globally-accredited Master of Engineering programs will allow you to work as a professionally-accredited engineer wherever your travels may take you. The Master of Engineering has 11 specialisations, three of which have an IT focus:

Master of Engineering (Software)

The ME (Software) provides students with a graduate qualification in engineering, specialising in software engineering.

The ICT industry in Australia is experiencing a critical skills shortage and highly-trained graduates are in strong demand. Graduate roles include software designers and developers, project managers, database managers, programmers, web developers, analysts, game developers and consultants to the private sector or government.

In this program you will:

- use your mathematical, scientific and technical knowledge and your creativity to tackle large-scale software design and development projects
- focus on team-based projects to design, implement and operate software engineering solutions
- work closely with IT professionals in a year-long industry project.

The ME (Software) is:

- a two-year full-time (or part-time equivalent) program for students who have completed the Computing and Software Systems major
- a three-year full-time program (or part-time equivalent) for students from other study backgrounds. Students who already have IT backgrounds may receive up to 1.5 years of credit
- accredited by the Australian Computer Society, Engineers Australia, and EUR-ACE®, opening up career opportunities around the globe.

Master of Engineering (Geomatics)

Geomatic engineers study the science and technology of measurement, mapping and visualisation. This program is for those who want a formal qualification in geomatic engineering (surveying) at the Masters level. Graduates work in roles relating to land and surveying, in environmental remote sensing, disaster management and in firms specialising in land and resource management, mapping, three dimensional visualisation and spatial data infrastructure.

You will develop skills in these areas:

- geographic information systems (GIS)
- measurement, mapping and visualisation
- three-dimensional computer visualisations
- surveying
- satellite and photographic image processing.

The ME (Geomatics) is:

- a two-year full-time (or part-time equivalent) program for students who have completed the Geomatics major
- a three-year full-time program (or part-time equivalent) for students from other study backgrounds. Students who already have Geomatics backgrounds may receive up to 1.5 years of credit
- accredited by Engineers Australia, the Surveyor Registration Board Victoria, the Royal Institution of Chartered Surveyors and EUR-ACE®, opening up career opportunities around the globe.

Master of Engineering (Mechatronics)

Mechatronics Engineering is a fast-changing discipline that blends mechanical, electrical and software engineering to develop automation and advanced manufacturing technologies. Mechatronics engineers gain employment with companies that develop and use advanced automation equipment, computer integrated manufacturing systems and 'smart' products. They can work in product development, aerospace, robotics, and advanced manufacturing.

In this program, you will:

- combine in-depth technical knowledge with broader aspects of engineering
- learn to create and work with automated systems that feature computer control, such as robots and automobiles
- Benefit from industry interaction and undertake an industry project using state-of-the-art facilities

The ME (Mechatronics) is:

- a two-year full-time (or part-time equivalent) program for students who have completed the Computing and Software Systems major
- a three-year full-time program (or part-time equivalent) for students from other study backgrounds. Students who already have Computing and Software Systems, Electrical Systems or Mechanical Systems backgrounds may receive up to 1.5 years of credit
- accredited by Engineers Australia and EUR-ACE®, allowing graduates to practice as professional engineers around the globe.

Sandra Oveissi

Originally from Iran, Master of Engineering (Software) student Sandra Oveissi is in her second year of the program and is an ME Merit Scholarship recipient. Outside of study, Sandra keeps busy with community projects such as her work as IT Manager with Teachabout, which aims to improve the education of children from Aboriginal backgrounds. She also encourages young women to study engineering and technology through her work with Robogals. Sandra enjoys the interactivity of the Master of Engineering (Software).

"Each year we need to complete a project for real clients. This has helped me to improve my knowledge, in a formal and practical sense, while increasing my confidence through experiencing software engineering projects in real environment."



Other Graduate Coursework programs

Master of Spatial Information Science (MSISc)

Spatial information is an essential part of our economic infrastructure, underpinning environmental management, land tenure systems, urban planning, public health and much more. The MSISc allows students to apply spatial information to their undergraduate study in related disciplines such as:

- computing
- planning
- environments
- health
- geomatics.

Approximately 60% of the program comprises spatial information science subjects, with the remaining 40% from another discipline. There are wide-ranging elective choices.

The MSISc is:

- a two-year full-time program. Part-time study is available
- accredited by the Royal Institution for Chartered Surveyors and by EUR-ACE®, allowing graduates to work around the world as spatial experts.

There is a growing demand for people with expertise in spatial information, along with a current labour shortage in Australia. Spatial information graduates enjoy a variety of well-paid employment options in areas such as economics, cognitive science, computer science, civil engineering, social science, public health and environments. They can work as policy advisors to government and industry, disaster and emergency management experts working with GPS or designers of mobile location-based games.

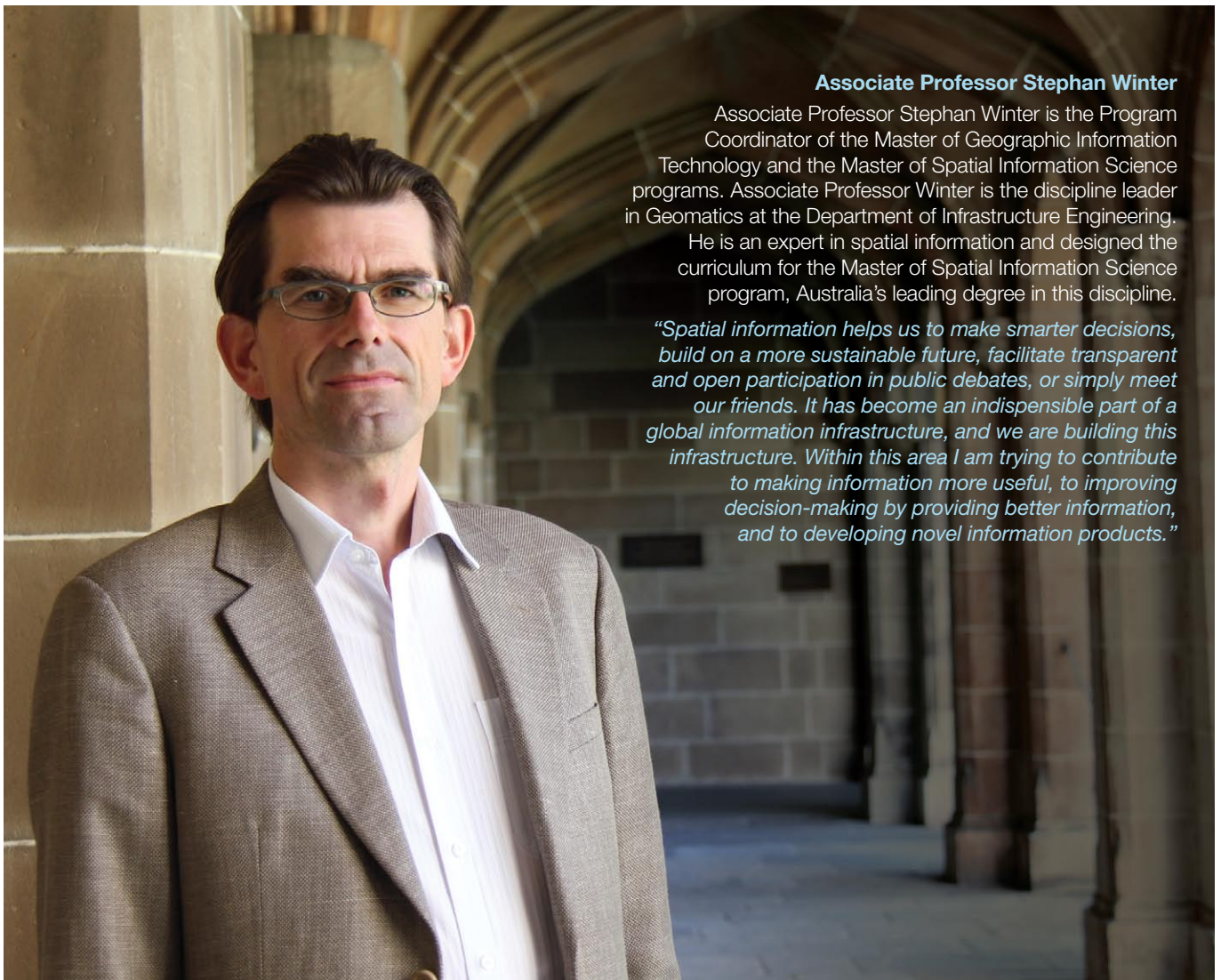
Master of Geographic Information Technology

The MGIT is designed for professionals working in engineering, surveying, geography, planning, environmental science, archaeology, agriculture and forestry.

It will also interest graduates who want an advanced understanding of the theory, technology and changing knowledge base in geographic/spatial information technologies.

Graduates will find careers in GIS, remote sensing, computer-aided design (CAD) and mapping.

The MGIT is a one year, full-time program. Part-time study is available.



Associate Professor Stephan Winter

Associate Professor Stephan Winter is the Program Coordinator of the Master of Geographic Information Technology and the Master of Spatial Information Science programs. Associate Professor Winter is the discipline leader in Geomatics at the Department of Infrastructure Engineering.

He is an expert in spatial information and designed the curriculum for the Master of Spatial Information Science program, Australia's leading degree in this discipline.

"Spatial information helps us to make smarter decisions, build on a more sustainable future, facilitate transparent and open participation in public debates, or simply meet our friends. It has become an indispensable part of a global information infrastructure, and we are building this infrastructure. Within this area I am trying to contribute to making information more useful, to improving decision-making by providing better information, and to developing novel information products."

Master of Science (Bioinformatics)

Bioinformatics is a new discipline that is becoming fundamental to health research and clinical practice. This program provides a broad education in the discipline, which involves the application of IT in the field of biology. You will develop an understanding of complex biological data and processes by developing and applying advanced computational techniques such as:

- data mining and machine learning
- biostatistics
- molecular and systems modelling
- visualisation.

Students also focus on a specific area of bioinformatics, and can undertake independent research.

The MSc (Bioinformatics) is:

- a pathway to PhD study
- a two-year full-time program. Part-time study is available.

Bioinformatics is one of the key sciences of the new century and demand for specialists is strong and growing. Bioinformatics graduates are well prepared for careers in research and industry as bioinformaticians,

biostatisticians, scientific programmers or computational biologists. Bioinformatics specialists will increasingly work alongside other health practitioners in our hospitals and clinics.

Master of Science (Computer Science)

Drive the next generation of computational innovation in this mixed coursework/research Masters degree. You will work across the spectrum of theory to application in areas such as the health sciences and social infrastructure.

The Master of Science (Computer Science) provides a research training experience across three core areas:

- distributed and parallel computing
- declarative languages
- knowledge technologies such as: data mining, bioinformatics, language technology and web search.

The program includes a research project specialising in one of the core areas.

The MSc (CS) is:

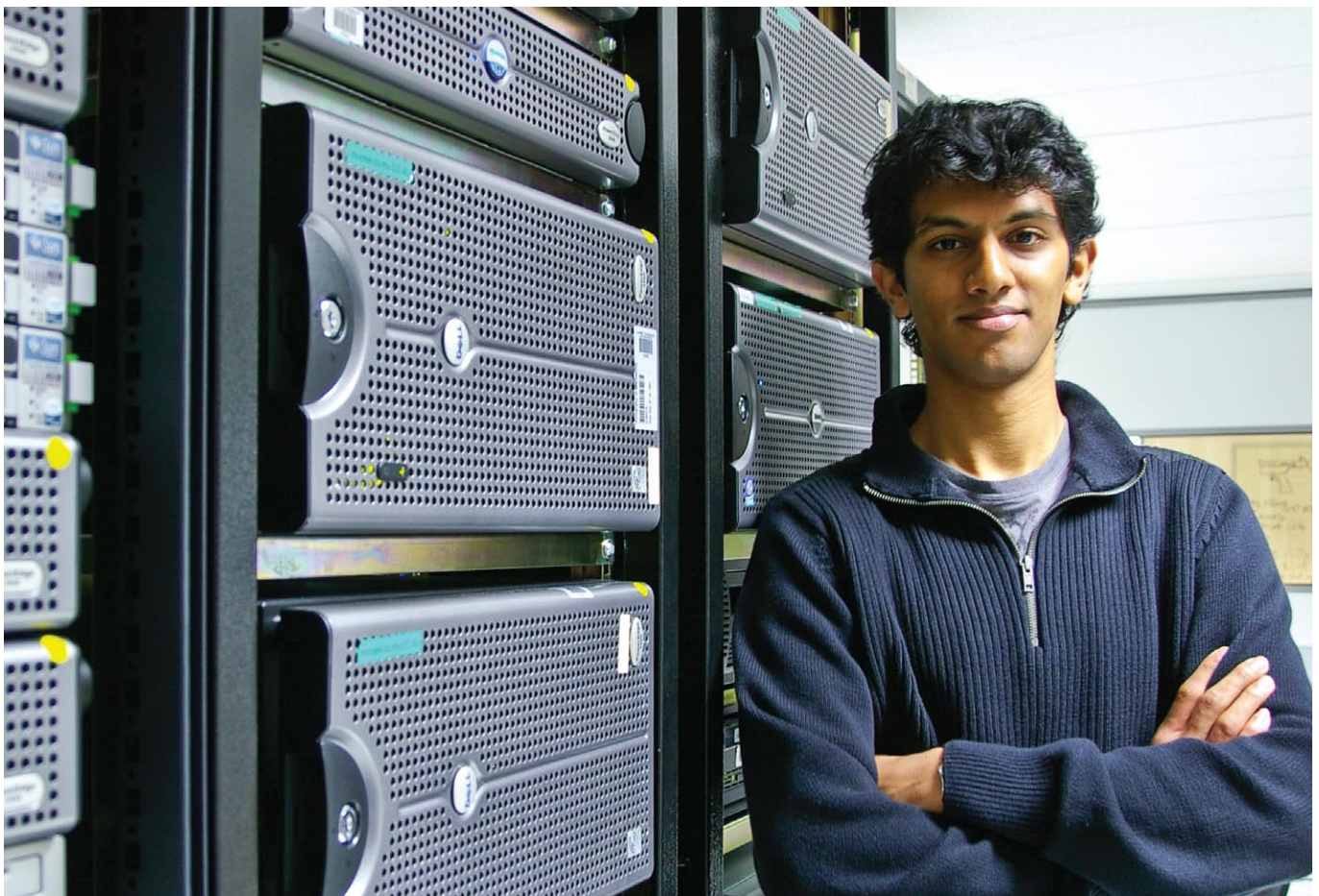
- a pathway to PhD research and to exciting innovation roles in the IT industry

- a two-year full-time program, following on from a Computing and Software Systems major (or equivalent at other institutions). Part-time study is available
- accredited by Euro-Inf@.

Graduates are well prepared for careers in research and industry. Computer scientists find roles as data analysts, applications programmers, information architects, systems and network analysts, software designers and engineers, project managers, research engineers and computational researchers.

Graduate Diploma/Graduate Certificate In Science (Computer Science)

These courses allow students who have completed an undergraduate degree to re-focus or expand their body of knowledge by completing the requirements of the Computing and Software Systems major in the Bachelor of Science not already completed. This may be either 100 points (Diploma) or 50 points (Certificate) as required to pursue the Master of Science (Computer Science).



Research in Computing and Information Systems

The University of Melbourne is an international leader in research in Computer Science, Information Systems, and Software Engineering and has been a leading contributor to the technology revolution for over 50 years.

Research strengths include Business Information Systems, Complex and Intelligent Systems, Distributed and Cloud Computing, Health and Bioinformatics, Interaction Design, Knowledge Discovery, Optimisation and Programming Languages, Spatial Information Science and Spatial Data Infrastructure.

Within these areas, a wide range of projects and collaborative ventures are underway, with organisations such as: NICTA Victorian Research Laboratory, IBM Global Research and Development Lab, Victorian Life Sciences Computing Initiative, Institute for a Broadband Enabled Society, Defence Science Institute and the Australian Urban Research Information Network.

Some of our key projects include:

- An investigation of media-based techniques for helping people to quit smoking

- Algorithms for analysis of genomic data
- Network security and cyber crime
- Resource allocation models for grid computing
- Engineering safety critical software systems
- Development of computational models for renal behavior
- Language preservation in Papua New Guinea.

Our academic staff and research students publish work in high-quality international conferences and journals, and have earned an enviable reputation for cutting-edge foundational and applied research. We tackle problems across the range of human activities, and develop solutions that are of both immediate and long-term benefit to the community.

More information about computing and information systems research is available at www.cis.unimelb.edu.au/research



Research Higher Degrees

The Doctor of Philosophy (PhD) and Master of Philosophy (MPhil) are opportunities for you to:

- pursue your passion for IT through research
- develop advanced skills by completing an independent and sustained research project under academic supervision
- become a true expert with a unique specialisation
- contribute to the state of knowledge in your chosen field.

You can choose to research a topic of your own devising or take a ready-made topic that is part of a larger research project.

Expert supervision is available for projects in these broad areas:

- autonomous and intelligent systems
- computational medicine and bioinformatics
- declarative languages
- health informatics
- interaction design
- data mining
- language technology and information retrieval



- organisational and social aspects of information
- parallel and distributed computing
- software engineering.

For more information on application procedures and entry requirements, please visit:

Department of Computing and Information Systems

www.cis.unimelb.edu.au





Enquiries

Melbourne School of Information

e: <http://msi.unimelb.edu.au/make-an-enquiry/>

w: www.msi.unimelb.edu.au

Melbourne School of Engineering

t: +61 3 8344 6944

e: eng-info@unimelb.edu.au

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Statement on privacy policy

When dealing with personal or health
information about individuals, the
University of Melbourne is obliged to
comply with the Information Privacy
Act 2000 and the Health Records
Act 2001. For further information
refer to: [www.unimelb.edu.au/
unisec/privacypolicy.htm](http://www.unimelb.edu.au/unisec/privacypolicy.htm)

Intellectual Property

For further information refer to:
www.unimelb.edu.au/Statutes



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