“I found the Master of Information Technology Management appealing because of the core subjects and the opportunity to undertake a research project in the second semester. The classes are well prepared and the quality of the content is relevant, not just in Australia, but worldwide.”
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IMPORTANT DATES

2015

2 MARCH
Semester 1 begins

27 JULY
Semester 2 begins

CLOSING DATES FOR APPLICATIONS
Refer to the relevant course at sydney.edu.au/courses

OUR ONLINE RESOURCES

Check out the videos on our website: sydney.edu.au/engineering
Connect with us through social media:

youtube.com/uniofsydney  Engineering.IT.Sydney.University  @Eng_IT_Sydney
OUR POSTGRADUATE PROGRAMS

Whatever your motivation, our specialised postgraduate programs will help you achieve your goals. You can:

- start or make the transition to a career in IT with a Graduate Diploma in Computing
- build your technical skills in a particular area with our Master of Information Technology
- make the transition to IT management with a Master of Information Technology Management
- deepen your technical and management skills with the combined Master of Information Technology/Master of Information Technology Management.

COURSEWORK PROGRAMS

The School of Information Technologies offers four distinct postgraduate coursework programs to suit different stages in your professional career.

Courses are designed in collaboration with industry and taught by practising industry professionals using real-life case studies. Classes are generally held in the evening to fit around your professional commitments.

The Graduate Diploma in Computing is designed for graduates with a non-IT background who want to acquire computing skills either to move into the IT industry or enhance their existing career with IT qualifications.

The Master of Information Technology program is designed for professionals and IT graduates who want to build on their existing technical skills or acquire expertise in a new area of IT.

The Master of Information Technology Management program is designed for IT professionals and technically skilled graduates who would like to make the transition into management. It helps develop important non-technical skills such as project management, team communication, and analytical thinking in the context of an IT environment.

The two-year combined Master of Information Technology and Master of Information Technology Management program is designed for IT graduates and professionals looking to develop both technical and managerial IT skills. It will equip participants with the broader skill set required to manage highly technical IT teams and projects effectively.

Both the information technology and information technology management programs offer the option of a graduate diploma and graduate certificate.

Certain units completed within the certificate and diploma programs can be credited to their respective master’s programs.

RESEARCH PROGRAMS

We offer two research programs in this field: a Master of Philosophy (MPhil) and a Doctor of Philosophy (PhD).

Each of these programs involves in-depth study of a specialised area. The research undertaken at the Faculty of Engineering and Information Technologies is multidisciplinary and centred on the key themes of robotics, biomedical engineering and technology, clean energy, water and the environment, complex systems, and materials and structures. These research themes break down conventional disciplinary barriers and enable us to work collaboratively to develop truly holistic solutions to today’s big issues, including health and ageing, communication needs, workplace safety and climate change.

For more information about our research programs, see pages 14 to 15.
WORKING WITH INDUSTRY

“At KPMG we’re always interested in strong pools of talent. The University of Sydney internship program enables KPMG to tap into the rich calibre of the University’s IT students and apply their skills to key projects throughout the organisation. The program provides mutual benefits – students gain hands-on experience in a corporate environment, and KPMG gains access to new talent.”

MIKE COHEN
DIRECTOR, KPMG

At the University of Sydney we understand the importance of working closely with industry. Our courses are designed and taught by industry professionals, so you will learn to develop solutions that address real-world needs, both now and in the future.

Our students and staff work together with many different organisations to enhance technology and improve business and industry productivity, including the Capital Markets Cooperative Research Centre, the Smart Services Cooperative Research Centre, National ICT Australia (NICTA) and businesses from diverse industries, such as KPMG, Qantas, and Microsoft Research.

Our expertise is highly valued, with our staff invited to provide consultancy services to many prominent organisations, including the Australian Securities and Investments Commission (ASIC), the National e-Health Transition Authority, the NSW Breast Cancer Institute, the World Health Organization and the New Zealand Ministry of Health.

We regularly update our curriculum to reflect the latest developments in industry and the commercial environment. Our external advisory board provides regular input into our courses and degrees to ensure their continued relevance for the needs of a changing industry. Companies represented on the board include Microsoft, Google, Qantas, Commonwealth Bank, Hewlett-Packard and BizCubed.

PROFESSIONAL ACCREDITATION

Our master’s degrees are accredited by the Australian Computer Society (ACS), Australia’s national organisation for information and communication technology professionals.

The ACS has reciprocal agreements with a number of overseas computer societies, including:

- Association for Computing Machinery (US)
- British Computer Society
- Canadian Information Processing Society
- Computer Society of India
- Computer Society of Pakistan
- Computer Society of South Africa
- Computer Society of Sri Lanka
- Hong Kong Computer Society
- Malaysia National Computer Confederation
- New Zealand Computer Society
- Singapore Computer Society.

Upon graduation you will be recognised as an IT professional, both nationally and internationally.
We provide you with all the technology resources you’ll need to complete your degree.

Our building is purpose-built to accommodate information and communications technology needs for today and into the future. As a postgraduate student you have 24/7 access to a dedicated postgraduate computing laboratory. Depending on your study requirements, you may also have access to our six purpose-built research labs.

Our **Experimental Research Laboratory** has 20 powerful, networked workstations with additional facilities for conducting experimental tasks under controlled conditions.

Our **Grid Lab** has high-performance computers and network infrastructure for experiments in grid computing.

Our **Digital Media Lab** is a professional studio for developing video and audio presentations.

Our **Pervasive Computing Laboratory** is used to investigate computing systems of the future, where the user interface and computing power are ubiquitous.

Our **Usability Laboratory** contains the latest eye-tracking facilities for evaluating user interfaces and understanding human interaction with emerging technologies.

Our **Visualisation and High-Performance Computing Laboratory (ViSLAB)** is one of Australia’s leading facilities for advanced visualisation and computing.
“My research applies computational geometry and geometric algorithms to the development of theoretical tools for movement analysis. By combining computational geometry with machine learning and data mining techniques, these tools can deliver richer data than traditional models. They are now being applied to sports analysis with the aim of developing better coaching techniques, spotting weaknesses in opposing teams and identifying and recruiting talented new players.”

ASSOCIATE PROFESSOR JOACHIM GUDMUNDSSON ARC FUTURE FELLOW, COMPUTATIONAL GEOMETRY, DATA STRUCTURES, APPROXIMATION ALGORITHMS

“I am conducting research into telehealth in collaboration with major hospitals and healthcare providers. We are developing mobile health technologies that leverage the power of mobile devices and IT infrastructure. Our ‘hospital at home’ remote monitoring and electronic patient health record ‘Avatar’ visualisation projects are improving healthcare services for patients and reducing the load on hospitals.”

DR JINMAN KIM SENIOR LECTURER DIRECTOR, NEPEAN TELEHEALTH TECHNOLOGY CENTRE THEME LEADER, INSTITUTE OF BIOMEDICAL ENGINEERING AND TECHNOLOGY
GRADUATE DIPLOMA IN COMPUTING

If you are a non-IT graduate wanting to move into the IT industry or if you are looking to enhance your career with a technology-based qualification, this course will suit you.

The Graduate Diploma in Computing will provide you with a strong foundation in information technologies and expose you to a range of specialist IT areas, which can then form the basis of a new career in IT or be developed with further study.

This program can also broaden your existing knowledge and enhance your career with IT qualifications. Information technology enables change and innovation across many areas.

A Graduate Diploma in Computing can help you design specialist systems and develop IT skills that are integral to a wide range of disciplines such as health, science, engineering and business.

If you are interested in undertaking further study in IT, completing 24 credit points with a credit average may prepare you for admission to the Master of Information Technology or Master of Information Technology Management.

COURSE STRUCTURE

Students are required to undertake 10 units of study comprising foundation units and specialist elective units chosen from either IT specialist or IT management specialist streams.

Foundation units include:
- Object-Oriented Design
- Digital Media Fundamentals
- Design of Networks and Distributed Systems
- Database Management Systems
- Algorithms
- Computer and Network Organisation
- Software Development in Java
- Systems Analysis and Modelling.

Classes are generally held in the evening to accommodate employment commitments.

Mid-year entry is also available, with the option of completing the program through full-time or part-time study.

ADMISSION REQUIREMENTS

Applicants require either:
- a recognised bachelor’s degree with a credit average or above including units of study with a mathematical foundation demonstrating significant numeracy skills; or
- a recognised bachelor’s degree with a credit average or above and evidence of prior learning which is considered to demonstrate the knowledge and aptitude required to undertake this course.

Applicants with a non-degree qualification in conjunction with substantial professional IT development experience will be assessed for admission on a case-by-case basis.

COURSE DURATION

The Graduate Diploma in Computing is an 18-month program.

Depending on the level and type of your previous studies, you may be eligible for up 12 credit points of recognised prior learning, which may enable you to complete the program in one year. You need to apply for Recognition for Prior Learning when submitting your application.

For more information, visit sydney.edu.au/courses
“Having a background in linguistics, the Graduate Diploma in Computing allowed me to improve my computer science skills quickly and pursue my passion of computational linguistics. As well as undertaking a PhD in this field, I’m now the founder of a start-up company.”

NICKY RINGLAND
GRADUATE DIPLOMA OF COMPUTING GRADUATE
PhD CANDIDATE
The Master of Information Technology program is for IT professionals who are seeking to extend and update their technical knowledge of advanced computing subjects. The program also provides an excellent retraining opportunity for professionals who wish to move to a new IT specialisation.

ADMISSION REQUIREMENTS

Master of Information Technology
Applicants require one of the following:
– a recognised bachelor’s degree with a credit average in a major sequence in any aspect of IT; or
– a recognised Bachelor of Engineering with a credit average in a major sequence in computer, software or telecommunications engineering; or
– a Graduate Diploma in Computing or Graduate Diploma in Information Technology from the University of Sydney with a credit average.

If you hold one of these qualifications without a credit average, you may be eligible for entry into the Graduate Certificate in Information Technology.

If you do not meet these requirements, you may be eligible for entry into the Graduate Diploma in Computing after completing at least 24 credit points with a credit average. This option allows you to obtain the Master of Information Technology in two years of full-time study.

Graduate Diploma in Information Technology
Applicants require one of the following:
– a recognised bachelor’s degree with a credit average in a major sequence in any aspect of IT; or
– a recognised Bachelor of Engineering with a credit average in a major sequence in computer, software or telecommunications engineering; or
– evidence of recognised prior learning which is considered to demonstrate the knowledge and aptitude required to undertake this course.

COURSE DURATION

Master of Information Technology
18 months of full-time study or the part-time equivalent.

Depending on the level and type of your previous studies, you may be eligible for up to 24 credit points (6 months, based on full-time study load) of recognised prior learning. You need to apply for Recognition for Prior Learning when submitting your application.

Graduate Diploma in Information Technology
One year of full-time study or the part-time equivalent.

Mid-year entry is available. Classes are generally held in the evening to accommodate professionals who are employed during the day.

For more information, visit sydney.edu.au/courses
## MASTER OF INFORMATION TECHNOLOGY COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Core units</th>
<th>Professional Practice in IT</th>
<th>Understanding IT Innovations</th>
<th>Project Management in IT</th>
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</thead>
<tbody>
<tr>
<td>Majors</td>
<td>Software Engineering</td>
<td>Digital Media Technology</td>
<td>Networks and Distributed Systems</td>
</tr>
<tr>
<td>Foundation units</td>
<td>Intro to Software Engineering Practice, Object Orientated Design, Systems Analysis and Modelling</td>
<td>Digital Media Fundamentals</td>
<td>Design of Network Protocols and Distributed Systems</td>
</tr>
<tr>
<td>Major</td>
<td>Data Management and Analytics</td>
<td>Biomedical and Health Informatics</td>
<td>Telecommunications Engineering</td>
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<tr>
<td>Foundation units</td>
<td>Web Application Development</td>
<td>Multimedia Retrieval</td>
<td>Parallel and Distributed Computing</td>
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<tr>
<td>Major</td>
<td>Knowledge Discovery and Data Mining</td>
<td>Information Technologies and Systems</td>
<td>Design of Network Protocols and Distributed Systems</td>
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<tr>
<td>Major</td>
<td>IT in Biomedicine</td>
<td>Mobile Networks</td>
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<td>Major</td>
<td>Multimedia Design and Authoring</td>
<td>Pervasive Computing</td>
<td>Advanced Data Models</td>
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<td>Major</td>
<td>Advanced Network Technologies</td>
<td>Multimedia Retrieval</td>
<td>Introduction to Bioinformatics</td>
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<tr>
<td>Major</td>
<td>Introduction to Biomedical Informatics</td>
<td>Error Control Coding</td>
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<tr>
<td>Major</td>
<td>Web Application Development</td>
<td>Mobile Networks</td>
<td>Statistical Natural Language Processing</td>
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<td>Major</td>
<td>Mobile Networks</td>
<td>Statistical Natural Language Processing</td>
<td>Wireless Engineering</td>
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<tr>
<td>Major</td>
<td>Statistical Natural Language Processing</td>
<td>Satellite Communications Systems</td>
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<td>Major</td>
<td>Multimedia Retrieval</td>
<td>Optical Communications Systems</td>
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<td>Major</td>
<td>Cloud Computing</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Large Scale Networks</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Data Analytics and Business Intelligence</td>
<td>Mobile Computing</td>
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<td>Major</td>
<td>Enterprise Healthcare Information Systems</td>
<td>Mobile Computing</td>
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<td>Major</td>
<td>Multimedia Computing</td>
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<td>Major</td>
<td>Mobile Computing</td>
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<td>Major</td>
<td>Cloud Computing</td>
<td>Mobile Computing</td>
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<td>Major</td>
<td>e-Health for Health Professionals</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Visual Analytics</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Epidemiology Methods and Uses</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Knowledge Management Systems</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Mobile Computing</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Cyber Security</td>
<td>Optical Networks</td>
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<td>Major</td>
<td>Cyber Security</td>
<td>Optical Networks</td>
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<tr>
<td>Project</td>
<td>IT Project – Computing</td>
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</table>

- **Foundation units**
  - Intro to Software Engineering Practice
  - Object Orientated Design
  - Systems Analysis and Modelling
  - Digital Media Fundamentals
  - Design of Network Protocols and Distributed Systems
  - Database Management Systems
  - IT for Health Professionals
  - Design of Network Protocols and Distributed Systems

- **Major units**
  - Software Engineering
  - Digital Media Technology
  - Networks and Distributed Systems
  - Data Management and Analytics
  - Biomedical and Health Informatics
  - Telecommunications Engineering

- **Specialist units**
  - Web Application Development
  - Multimedia Retrieval
  - Parallel and Distributed Computing
  - Knowledge Discovery and Data Mining
  - Information Technologies and Systems
  - Design of Network Protocols and Distributed Systems

- **Project**
  - IT Project – Computing
The Master of Information Technology Management prepares you to succeed in management in areas that use technology to operate, innovate and expand business endeavours. It will equip you with an in-depth understanding of key areas such as business analytics and intelligence, IT strategy and IT project management. It will also help you develop the skills to effectively manage the design, delivery and operation of business technologies effectively.

You will have the opportunity to select from a number of advanced IT management topics to add depth and breadth to your studies. The course offers a research pathway for eligible candidates who are planning to pursue a higher degree by research.

ACCREDITATION

The Master of Information Technology Management is recognised as an industry-relevant award and is accredited by the Australian Computer Society as a professional level course.

ADMISSION REQUIREMENTS

Master of Information Technology Management

Applicants require one of the following:

- a recognised bachelor’s degree with a credit average in a major sequence in any aspect of IT; or
- a recognised Bachelor of Engineering with a credit average in a major sequence in computer, software or telecommunications engineering; or
- a Graduate Diploma in Computing, Graduate Diploma in Information Technology or in Information Technology Management from the University of Sydney with a credit average; or
- a recognised bachelor’s degree in any discipline, with a credit average, with a minimum of two years’ professional experience in IT.

If you hold one of these qualifications without a credit average, you may be eligible for entry into the Graduate Certificate in Information Technology Management.

Graduate Diploma in Information Technology Management

Applicants require one of the following:

- a recognised bachelor’s degree with a credit average in a major sequence in any aspect of IT; or
- a recognised Bachelor of Engineering with a credit average in a major sequence in computer, software or telecommunications engineering; or
- a Graduate Certificate in Information Technology or in Information Technology Management from the University of Sydney with a credit average; or
- a recognised bachelor’s degree in any discipline with a credit average, with a minimum of two years professional experience in IT.

If you do not meet these requirements, you may be eligible for entry into the Graduate Diploma in Computing. Subject to approval, you can later transfer into the Master of Information Technology Management after completing at least 24 credit points with a credit average. This option allows you to obtain a Master of Information Technology Management in two years of full-time study.
**Graduate Certificate in Information Technology Management**

Applicants require one of the following:
- a recognised bachelor’s degree in a major sequence of IT; or
- a recognised Bachelor of Engineering in a major sequence in computer, software or telecommunications engineering; or
- a recognised bachelor’s degree and at least two years professional experience in the IT industry; or
- evidence of recognised prior learning which is considered to demonstrate the knowledge and aptitude required to undertake this course.

**COURSE DURATION**

**Master of Information Technology Management**

18 months of full-time study or the part-time equivalent.

Depending on the level and type of your previous studies, you may be eligible for up to 24 credit points (six months, based on full-time study load) of recognised prior learning. You need to apply for Recognition for Prior Learning when submitting your application.

**Graduate Diploma in Information Technology Management**

One year of full-time study or the part-time equivalent.

**Graduate Certificate in Information Technology Management**

One semester of full-time study or the part-time equivalent.

Mid-year entry is available. Classes are generally held in the evening to accommodate professionals who are employed during the day.

For more information, visit sydney.edu.au/courses

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**MASTER OF INFORMATION TECHNOLOGY MANAGEMENT COURSE STRUCTURE**

<table>
<thead>
<tr>
<th>Core units</th>
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<tbody>
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</tr>
<tr>
<td>Foundation units</td>
<td>Computer and Network Organisation</td>
<td>Digital Media Fundamentals</td>
<td>Software Development in Java</td>
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<tr>
<td></td>
<td>Design of Networks and Distributed Systems</td>
<td>Algorithms</td>
<td>Object-Oriented Design</td>
</tr>
<tr>
<td>Specialist units</td>
<td>Information Technologies and Systems</td>
<td>Information Security Management</td>
<td>Services Science Management and Engineering</td>
</tr>
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<td></td>
<td>Change Management in IT</td>
<td>Advanced Topics in IT Project Management</td>
<td>Information Technology Strategy and Value</td>
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<tr>
<td>Elective units</td>
<td>Optional elective units</td>
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<tr>
<td>Project and Research units</td>
<td>IT Project – IT Management</td>
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</table>
MASTER OF INFORMATION TECHNOLOGY AND MASTER OF INFORMATION TECHNOLOGY MANAGEMENT

This combined degree is designed for IT professionals seeking to improve their understanding of the latest advancements in IT and help drive organisational transformation.

The Master of Information Technology and Master of Information Technology Management has been developed for skilled professionals seeking progression into senior IT management roles. It is designed to empower graduates with both the technical and managerial aspects of advanced technologies. This two-year program gives you the opportunity to complete specialist study in a range of IT-related disciplines, combined with a program in IT management. It can help you deepen your technical skills and knowledge of complex IT environments, as well as develop the skills to effectively manage the design, delivery and operation of business technologies.

You will have the opportunity to complete a major in a number of areas within IT including:
- Digital Media Technology
- Software Engineering
- Data Management and Analytics
- Biomedical and Health Informatics
- Networks and Distributed Systems
- Telecommunications Engineering.

In addition, the IT management subjects will provide advanced training in key management areas including innovation, security, service science and change management. You will also gain a thorough and detailed understanding of the management of resources such as projects, people, knowledge and technologies within organisations.

A compulsory industry-relevant project provides you with the opportunity to draw together the advanced computing and management knowledge you have gained during the course, synthesise this with your prior learning and experience, and draw conclusions that will form the basis of further investigation and professional growth.

ACCREDITATION
The combined Master of Information Technology and Master of Information Technology Management is recognised as an industry-relevant qualification and is accredited by the Australian Computer Society as a professional level course.
ADMISSION REQUIREMENTS
Applicants require one of the following:
– a recognised bachelor’s degree in information technology with a credit average; or
– a recognised Bachelor of Engineering with a credit average in a major sequence in computer, software or telecommunications engineering; or
– a Graduate Certificate or Graduate Diploma in Information Technology or Information Technology Management from the University of Sydney with a credit average.

COURSE DURATION
Two years of full-time study or the part-time equivalent.
Depending on the level and type of your previous studies, you may be eligible for up to 24 credit points (6 months, based on full time study load) of recognised prior learning. You need to apply for Recognition for Prior Learning when submitting your application.

“...The combined program is incredibly flexible and diverse. It has given me an in-depth understanding of IT systems and has opened up numerous professional opportunities.”

AVIRAL SHUKLA
COMBINED MIT/MITM STUDENT

For more information, visit sydney.edu.au/courses

MASTER OF INFORMATION TECHNOLOGY AND MASTER OF INFORMATION TECHNOLOGY MANAGEMENT COURSE STRUCTURE

<table>
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<tr>
<th>Core units</th>
<th>Professional Practice in IT</th>
<th>Understanding IT Innovations</th>
<th>Project Management in IT</th>
<th>Information Technologies and Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist units</td>
<td>Master of Information Technology units (for a complete list of subjects available, see the Master of Information Technology program)</td>
<td>Master of Information Technology Management units (for a complete list of available subjects, see the Master of Information Technology Management program)</td>
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<tr>
<td>Project</td>
<td>IT Project and electives</td>
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</table>
RESEARCH PROGRAMS

Research at the University of Sydney is dynamic and always evolving, inspiring enquiring minds and providing new tools and ways of thinking that lead to innovation.

SUPPORT
We support our researchers in a number of ways, from providing strategic advice on research opportunities to assisting them to access funding.

As well as supporting our researchers to excel in their chosen field, we help them to develop transferable skills in research leadership and management, commercialisation, communication and cross-disciplinary capabilities.

We are committed to the continuous improvement of our research performance, to maintaining our leading role within Australia and to improving our competitive position internationally, in order to contribute to the economic, social and cultural wellbeing of Australia and the wider world.

This commitment means providing our researchers with all the support they need to consolidate and build on our strong research profile.

OUR RESEARCH PROGRAMS
Our research degrees have two purposes. The first is for you to prepare a substantial piece of work that represents a significant contribution to your chosen field of study. The second is to train you in fundamental research methodology and equip you with the transferable skills required to pursue a career in academia, consulting, industry, business or other related areas.

Master of Philosophy (MPhil)
Duration: 1 to 2 years
The Master of Philosophy program involves the preparation of a thesis considered to make an original contribution to the subject concerned. Applicants require a bachelor’s degree with first or second-class honours or an equivalent qualification from an accredited institution. Master of Philosophy candidates who achieve an outstanding performance may be eligible to upgrade to the Doctor of Philosophy.

Doctor of Philosophy (PhD)
Duration: 3 to 4 years
The Doctor of Philosophy program involves the preparation of a thesis considered to make a substantial and original contribution to the subject concerned. Applicants require a master’s degree by research or a bachelor’s degree with first or second-class honours from a recognised institution.
My research explores robotic learning and artificial intelligence. Robots which can learn and operate more autonomously have great potential in many fields, like aged care.

“MY RESEARCH EXPLORES ROBOTIC LEARNING AND ARTIFICIAL INTELLIGENCE. ROBOTS WHICH CAN LEARN AND OPERATE MORE AUTONOMOUSLY HAVE GREAT POTENTIAL IN MANY FIELDS, LIKE AGED CARE.”

LIONEL OTT
PHD CANDIDATE

STUDENT PROFILE
PhD candidate Lionel Ott’s research into robotic learning and artificial intelligence is redefining how we think about machine technology. Lionel’s research explores methods that give robots greater autonomy by enabling them to learn directly from their environment. This contrasts with the common and inflexible approach in which a robot can only learn directly from a human.

Lionel’s work focuses on how a robot can collect its own data and use it to build its own environmental model. In developing autonomously learning robots, Lionel has overcome several challenges. “The models the robot builds may not be intuitive to humans, making their interpretation difficult,” he explains. “Robots may also have limited computational resources, yet still need real-time updates of their models to achieve their objectives. I have developed robots that can not only map an environment and identify obstacles, but also help us to learn the dynamics of moving objects, such as pets.”

Lionel also points out that "robots are traditionally used for dull, repetitive or dangerous tasks, but once we instil in them a capacity for self-learning, they can start to take on tasks of far wider significance".

Lionel’s research has the potential to develop robots and systems that can help the elderly or dementia sufferers maintain a higher level of independence. For example, robots can assist with recovery after a fall and help people maintain a higher standard of living, which in turn reduces the burden on hospitals and care facilities.
SCHOLARSHIPS

There are various scholarships available to postgraduate students to help you achieve all your goals while studying here.

Here is a selection of some of the scholarships on offer. To view all scholarship opportunities, visit sydney.edu.au/scholarships and sydney.edu.au/engineering/scholarships

COURSEWORK SCHOLARSHIPS

Entry scholarships
The School of Information Technologies offers several entry scholarships for students commencing the Master of Information Technology, the Master of Information Technology Management or the combined Master of Information Technology and Master of Information Technology Management. These scholarships are awarded on the basis of academic merit, as indicated by the applicant’s performance in their undergraduate studies, and are worth $5000 each.

Half-fee scholarships
The school also offers a limited number of one-semester, half-fee scholarships for students commencing their final semester of study in the Master of Information Technology, the Master of Information Technology Management or the combined Master of Information Technology and Master of Information Technology Management programs. The scholarships are awarded on the basis of academic merit in the previous semester of full-time study, and provide a 50 percent tuition fee waiver for one semester.

Rockend Graduate Scholarship for the Master of Information Technology
Students enrolled full time in the Master of Information Technology who achieve a distinction average in the first semester of the program are eligible to apply for the Rockend Graduate Scholarship. Awarded in second semester and based on academic merit, the scholarship is worth $15,000.

Diversity scholarships
The School of Information Technologies offers a number of scholarships for international students commencing the Master of Information Technology, the Master of Information Technology Management or the combined master’s degree. These scholarships are awarded to students from diverse cultural and socioeconomic backgrounds on the basis of academic merit and are worth $6000 each.

Dr Abdul Kalam International scholarships
Dr Abdul Kalam, former president of India and distinguished scientist and technologist, has demonstrated his support for international students wishing to study engineering and IT at the University of Sydney through the establishment of a new merit-based scholarships scheme. Scholarships are available to new students commencing a postgraduate coursework program within the faculty.

Sydney Achievers International scholarships
These scholarships are available to new international students commencing postgraduate coursework at the University and are awarded on the basis of academic merit.

RESEARCH SCHOLARSHIPS

The University offers a number of research and supplementary scholarships available, including:

– Australian Postgraduate Awards,
  University of Sydney Postgraduate Awards and Vice-Chancellor’s Research Scholarships
– University of Sydney International Scholarships
– Australian Government Research Scholarships for International Students
– International Postgraduate Research Scholarships
– Australian Development Scholarships
– Australian Leadership Awards
– Postdoctoral Research Fellowships.

For more information, visit sydney.edu.au/scholarships and sydney.edu.au/engineering/scholarships or email: scholarships.engineering@sydney.edu.au
Domestic and international applicants can apply online for postgraduate study by coursework by following the steps below:

1. **Search**
   Search for the course you are interested in at [sydney.edu.au/courses](http://sydney.edu.au/courses)

2. **Select**
   Select the program of study you wish to apply for and check that you meet the admission requirements.

3. **Apply**
   Click the ‘Apply now’ button to proceed with your application.

**HOW MUCH DOES A COURSEWORK PROGRAM COST?**

Most postgraduate coursework programs are full-fee-paying courses. Essentially this means you can pay your fees up front for the units you study, or defer your payments through the federal government’s FEE-HELP loan scheme so that you pay later through the taxation system.

There are also a limited number of Commonwealth-supported places for some postgraduate coursework programs.

For more information on Commonwealth-supported places or FEE-HELP, visit [www.studyassist.gov.au](http://www.studyassist.gov.au)

For information on current postgraduate program fees, see [sydney.edu.au/courses](http://sydney.edu.au/courses)

**Note:** Fees are reviewed annually, and they are likely to increase each year that you study, effective at the beginning of each calendar year.
Applying for a research program at Sydney is a five-step process.

1. Meet the academic requirements
To apply for a higher degree by research, which includes our Master of Philosophy and PhD programs, you need to have completed an honours degree, a master’s by research degree or a master’s by coursework program with a minor thesis component.

2. Find an academic supervisor
Our Research Supervisor Connect database lists all the University research opportunities currently available for new students. Visit the website to search through research opportunities, read about supervisors' areas of interest and expertise, and make contact with them.

3. Develop a research proposal
Once you have initiated discussions with an academic, you need to develop and submit an initial research proposal. The supervisor will read and comment on your proposal, and indicate if they are willing to supervise you. You can find more information about developing a proposal at sydney.edu.au/research/opportunities under ‘how to apply’.

4. Identify academic referees
You will need to provide details of two academic referees who are familiar with your previous academic qualifications and achievements who can then submit an academic referee report on your behalf. Instructions are provided within your online application form.

5. Submit your application
Once you’ve secured a supervisor and academic referees, and prepared your research proposal, you’re ready to submit your application. All applications for higher degrees by research should be lodged online. First, visit sydney.edu.au/courses and search for your program of study. Then select the degree you wish to apply for. Click on the ‘apply’ button to begin the application process.

HOW TO FIND A RESEARCH SUPERVISOR
As a research candidate, you are expected to make contact with your potential academic supervisor before submitting your application. Initially, the best way of looking for a supervisor is to search the Research Supervisor Connect database.

sydney.edu.au/research/opportunities
# Faculty Postgraduate Courses at a Glance

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Duration in Years</th>
<th>Total Credit Points</th>
<th>Mode of Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Diploma in Computing</td>
<td>1.5</td>
<td>60</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td><strong>Information Technology</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificate in Information Technology</td>
<td>0.5</td>
<td>24</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Graduate Diploma in Information Technology</td>
<td>1</td>
<td>48</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Master of Information Technology</td>
<td>1.5</td>
<td>72</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td><strong>Information Technology Management</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificate in Information Technology Management</td>
<td>0.5</td>
<td>24</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Graduate Diploma in Information Technology Management</td>
<td>1</td>
<td>48</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Master of Information Technology Management</td>
<td>1.5</td>
<td>72</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td><strong>Combined Information Technology / Information Technology Management</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Master of Information Technology/Master of Information Technology Management</td>
<td>2</td>
<td>96</td>
<td>Full time/part time on campus</td>
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<td><strong>Engineering</strong></td>
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<tr>
<td>Graduate Certificate in Engineering</td>
<td>0.5</td>
<td>24</td>
<td>Full time/part time on campus</td>
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<tr>
<td>Graduate Diploma in Engineering</td>
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<td>36</td>
<td>Full time/part time on campus</td>
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<tr>
<td>Master of Engineering</td>
<td>1.5</td>
<td>72</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>COURSE NAME</td>
<td>DURATION IN YEARS</td>
<td>TOTAL CREDIT POINTS</td>
<td>MODE OF DELIVERY</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------</td>
<td>---------------------</td>
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<tr>
<td><strong>PROFESSIONAL ENGINEERING</strong></td>
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<td></td>
</tr>
<tr>
<td>Master of Professional Engineering</td>
<td>2-3</td>
<td>144</td>
<td>Full time on campus/part time on campus with permission</td>
</tr>
<tr>
<td><strong>PROJECT MANAGEMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduate Certificate in Project Management</td>
<td>0.5</td>
<td>24</td>
<td>Full time/part time on campus/block mode/flexible delivery</td>
</tr>
<tr>
<td>Graduate Diploma in Project Management</td>
<td>1</td>
<td>48</td>
<td>Full time/part time on campus/block mode/flexible delivery</td>
</tr>
<tr>
<td>Master of Project Management</td>
<td>1.5</td>
<td>72</td>
<td>Full time/part time on campus/block mode/flexible delivery</td>
</tr>
<tr>
<td><strong>PROJECT LEADERSHIP</strong></td>
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</tr>
<tr>
<td>Graduate Certificate in Project Leadership</td>
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<td>24</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Graduate Diploma in Project Leadership</td>
<td>1</td>
<td>36</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td>Master of Project Leadership</td>
<td>1</td>
<td>48</td>
<td>Full time/part time on campus</td>
</tr>
<tr>
<td><strong>RESEARCH</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>Full time/part time</td>
</tr>
<tr>
<td>Doctor of Philosophy</td>
<td>Min 3</td>
<td>N/A</td>
<td>Full time/part time</td>
</tr>
</tbody>
</table>

Note:
All courses have a mid-year intake. Please refer to sydney.edu.au/courses for up-to-date course information.