



THE UNIVERSITY OF
SYDNEY

The University of Sydney

Contact us

sydney.edu.au/ask
1800 SYD UNI (1800 793 864)
+61 2 8627 1444
(outside Australia)

sydney.edu.au/engineering

Postgraduate guide 2018

Engineering, Information Technologies
and Project Management

Forest Stewardship Council (FSC®) is a globally recognised certification overseeing all fibre sourcing standards. This provides guarantees for the consumer that products are made of woodchips from well-managed forests and other controlled sources with strict environmental, economical and social standards.





THE UNIVERSITY OF
SYDNEY

Contact us

sydney.edu.au/ask
1800 SYD UNI (1800 793 864)
+61 2 8627 1444
(outside Australia)

Postgraduate guide 2018

Engineering, Information Technologies and Project Management

Join us

| | |
|--|---|
| Where will postgraduate study lead you? .. | 2 |
| Postgraduate coursework options | 4 |
| Courses at a glance | 5 |

Courses

| | |
|---|----|
| Master of Complex Systems | 6 |
| Master of Engineering..... | 8 |
| Master of Professional Engineering | 11 |
| Master of Project Leadership | 14 |
| Master of Project Management | 16 |
| Master of Data Science | 18 |
| Master of Health Technology Innovation.. | 20 |
| Master of Information Technology | 22 |
| Master of Information Technology Management | 24 |
| Master of Information Technology/ Master of Information Technology Management | 26 |

Research

| | |
|------------------------------------|----|
| Master of Philosophy | 29 |
| Doctor of Philosophy..... | 29 |
| Graduate Diploma in Computing..... | 30 |

How to apply

| | |
|-----------------------|----|
| How to apply | 31 |
| Fees and costs | 32 |
| Important dates | 33 |

Where will postgraduate study lead you?

Whether you want to gain new professional qualifications, change your career direction or pursue a personal ambition, the University of Sydney will take you to places never imagined.

Our coursework and research degrees offer far more than knowledge. You'll join leading thinkers to challenge the known and explore the unknown, in a stimulating environment that encourages both learning and networking.

World standard education

Our regular ranking in the top 50 universities worldwide reflects our outstanding reputation.*

Graduates from the University of Sydney are among the world's most sought-after employees – we are ranked first in Australia and fourth in the world for graduate employability.**

The Australian Government ranked all of our research at world standard or above in its latest Excellence in Research for Australia ratings.

Connected with industry

At the Faculty of Engineering and Information Technologies, we understand the importance of working closely with industry. Our courses are designed with, and taught by, industry professionals. We partner with leaders from business, industry and academia based here in Sydney and around the world.

Our expertise and facilities are highly sought after, with staff regularly invited to provide professional consulting services for business and government agencies.

International partnerships

We are committed to international teaching, research and industry partnerships. We encourage our students, researchers and staff to engage in collaboration that deepens their knowledge and broadens their global outlook.

The faculty has developed partnerships with top 100 international institutions, including a landmark biomedical engineering alliance with Shanghai Jiao Tong University in China.

Globally recognised qualifications

Our Master of Professional Engineering is accredited by Engineers Australia, the national engineering accreditation body. This enables you to practise as an engineer in Australia and around the world.

Our Master of Information Technology, Master of Information Technology Management and the combined master's degree program are accredited by the Australian Computer Society as professional-level courses.

Our Master of Project Management is accredited by the Project Management Institute's Global Accreditation Center for Project Management Education programs.



Accredited Program



* QS World University Rankings 2016-17

** QS Graduate Employability Rankings 2017

Multidisciplinary strengths

Our research breaks down conventional barriers by uniting expertise across disciplines to develop truly holistic solutions to today's big issues. We attract a diverse group of leading scholars from around the world and provide an environment that encourages collaboration and innovation.

A world of opportunity

We'll connect you to the world through our exchange programs, helping you gain real-world experience to enhance your career prospects, while building your networks and immersing you in other cultures and environments.

The University of Sydney has more than 270 exchange partners in 41 countries. More than 120 partners are listed among the top 200 universities in the world.*

If you are eligible to become an exchange student, you will remain enrolled full time at the University while you are overseas and continue to pay University of Sydney tuition fees.

As a postgraduate student, you will be eligible to go on exchange if your course has a minimum of 72 credit points (to allow enough lead time to apply), and if it does not have specific accreditation requirements that must be completed here in Sydney (which will then allow space for electives). Find your overseas adventure:

- sydney.edu.au/student-exchange

Innovative learning environment

To support research and teaching excellence, we are investing in the latest technology and exceptional facilities. Our labs, teaching spaces and learning hubs are designed to help you get the most out of your learning experience.

Our leading facilities include the:

- Australian Centre for Field Robotics, one of the world's leading robotics research institutes, instrumental in developing breakthrough technologies in field robotics principles and systems
- Centre for Advanced Structural Engineering, which houses one of the largest structural engineering laboratories in the southern hemisphere
- Visualisation and High-Performance Computing Laboratory (VisLAB), one of Australia's leading facilities for advanced visualisation and computing.

Reduce the length of your postgraduate degree

Related study or professional work experience may be counted as credit toward your degree as recognition of prior learning (RPL), also sometimes called 'credit for previous studies'.

If granted RPL, you may be allowed to skip certain units and reduce the total credit points needed to complete your course. This would enable a fast track to graduation.

RPL arrangements vary by course. There may be existing arrangements for some qualifications. To check the details for your course, visit:

- sydney.edu.au/courses

You need to apply for RPL when completing your online course application. For details, visit:

- sydney.edu.au/study/credit

“I am undertaking research into advanced control systems for robotic spacecraft, working with the NASA Johnson Space Center.”

Ben Morrell
Engineering Honours (Aeronautical)
Aerospace PhD candidate



* Times Higher Education World University Rankings 2016-17

Postgraduate coursework options

Master's degrees

Master's degrees are ideal if you need specialised knowledge and skills, and want to take the next step in your career. You can gain professional qualifications for your next job, upskill for your current role and develop academic expertise in your chosen field.

Master's degrees typically require between one and two years of full-time study. If you can't commit to a full-time master's degree straight away (eg, because of family or work commitments), we offer the flexibility of part-time study for domestic students.

Graduate diplomas and graduate certificates

Graduate diplomas and graduate certificates are usually based on master's degrees and offer a subset of the master's units. They are an alternative worth considering if you want to try out postgraduate study, increase the breadth of your expertise and knowledge, or you don't quite meet the entry requirements for a master's degree.

Once you finish the graduate certificate (usually six months of full-time study, 12 months part time) you may then be able to progress to the equivalent graduate diploma (usually one year full time, two years part time) or ultimately, a master's degree (see the progression diagram below).

A graduate certificate or diploma is also an excellent option if you don't want to commit to a full master's, but still need a solid grounding in your chosen field.

Short courses

If you are not sure about studying a full degree at the University of Sydney or are interested in professional development, you can choose to take a single unit of study as a 'non-award' course.

We offer hundreds of units of study across selected faculties, including many that you can use to earn continuing professional development (CPD) credit or explore subjects of general interest.

Regardless of which option you choose, you will receive an official academic transcript at the end of your studies and may be able to request credit for a longer course, such as a master's degree.

Graduate certificate

Complete some of the essential units of study towards a master's degree
Usually six months of full-time study

Graduate diploma

Complete more units of study that you can count towards a master's degree
Usually one year of full-time study

Master's degree

Gain specialised skills and knowledge or professional qualifications
Usually one or two years of full-time study

Courses at a glance

The Faculty of Engineering and Information Technologies offers the following postgraduate programs.

| Course name | Duration (years) | Credit points | Mode of delivery | | | | Page |
|--|------------------|---------------|------------------|-----------|------------|----------|------|
| | | | full time | part time | block mode | flexible | |
| Complex Systems | | | | | | | |
| Master of Complex Systems | 2 | 96 | ✓ | ✓ | | | 6 |
| Graduate Diploma in Complex Systems | 1 | 48 | ✓ | ✓ | | | 6 |
| Engineering | | | | | | | |
| Master of Engineering | 1.5 | 72 | ✓ | ✓ | | | 8 |
| Graduate Diploma in Engineering | 1 | 36 | ✓ | ✓ | | | 8 |
| Graduate Certificate in Engineering | 0.5 | 24 | ✓ | ✓ | | | 8 |
| Master of Professional Engineering | 2-3 | 144 | ✓ | ✓ | | | 11 |
| Project Management | | | | | | | |
| Master of Project Leadership | 1 | 48 | ✓ | ✓ | ✓ | ✓ | 14 |
| Graduate Diploma in Project Leadership | 1 | 36 | ✓ | ✓ | ✓ | ✓ | 14 |
| Graduate Certificate in Project Leadership | 0.5 | 24 | ✓ | ✓ | ✓ | ✓ | 14 |
| Master of Project Management | 1.5 | 72 | ✓ | ✓ | ✓ | ✓ | 16 |
| Graduate Diploma in Project Management | 1 | 48 | ✓ | ✓ | ✓ | ✓ | 16 |
| Graduate Certificate in Project Management | 0.5 | 24 | ✓ | ✓ | ✓ | ✓ | 16 |
| Information Technologies | | | | | | | |
| Master of Data Science | 1 | 48 | ✓ | ✓ | | | 18 |
| Graduate Certificate in Data Science | 0.5 | 24 | ✓ | ✓ | | | 18 |
| Master of Health Technology Innovation | 2 | 96 | ✓ | ✓ | ✓ | ✓ | 20 |
| Graduate Diploma in Health Technology Innovation | 1.5 | 60 | ✓ | ✓ | ✓ | ✓ | 20 |
| Master of Information Technology | 1.5 | 72 | ✓ | ✓ | | | 22 |
| Graduate Diploma in Information Technology | 1 | 48 | ✓ | ✓ | | | 22 |
| Graduate Certificate in Information Technology | 0.5 | 24 | ✓ | ✓ | | | 22 |
| Master of Information Technology Management | 1.5 | 72 | ✓ | ✓ | | | 24 |
| Graduate Diploma in Information Technology Management | 1 | 48 | ✓ | ✓ | | | 24 |
| Graduate Certificate in Information Technology Management | 0.5 | 24 | ✓ | ✓ | | | 24 |
| Master of Information Technology/ Master of Information Technology Management | 2 | 96 | ✓ | ✓ | | | 26 |
| Graduate Diploma in Computing | 1.5 | 60 | ✓ | ✓ | | | 30 |
| Research | | | | | | | |
| Master of Philosophy (MPhil) | 2+ | N/A | ✓ | ✓ | | | 29 |
| Doctor of Philosophy (PhD) | 3+ | N/A | ✓ | ✓ | | | 29 |

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

Master of Complex Systems

Modern smart cities, infrastructure and ecosystems are susceptible to abrupt, large-scale and disruptive dynamics. Gain the expertise to anticipate, control and manage the complexity of the unexpected.

Complex systems are composed of large numbers of diverse interacting parts, making them susceptible to unexpected, large-scale, and apparently uncontrollable behaviours.

Small changes can generate large, amplified effects. For example, a single malfunction in a local substation can lead to cascading state-wide electricity grid failures, or the emergence of a new pathogen in a remote village can give rise to a devastating global epidemic.

This uniquely designed program will equip you with the expertise to model, analyse and design resilient strategies for crisis forecasting and management in the areas of

technological, socioeconomic and socioecological systems. It will develop your skills in quantitative modelling and computational simulation of system dynamics, complementing your existing skills in engineering, computer science, information technology, physics, mathematics, health, biology or business.

These unique skills will enable you to operate across discipline boundaries, providing key input and insights to help solve complex global challenges.

Course structure

This program comprises core units of study along with electives culminating in a specialisation in your chosen field.

Specialisations

Leveraging the Centre for Complex System's research strengths, you have the flexibility to tailor your learning to your professional interests with the choice of five specialisations:

- biosecurity
- ecology
- engineering
- research methods
- transport.

You will also undertake an industry-based capstone project focused on modelling a complex problem and delivering a novel solution. Projects can be directly related to your area of specialisation or your vocational objectives or interests.

Course duration

2 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of this degree. See page 5 for details.





Available courses

This program can be taken at the level of a master's degree or graduate diploma, as below.

| Course name | Credit points | Duration (full time) |
|-------------------------------------|---------------|----------------------|
| Master of Complex Systems | 72 | 2 years |
| Graduate Diploma in Complex Systems | 48 | 1 year |

Admission requirements

To apply for the Master of Complex Systems, you need to have a recognised bachelor's degree with a minimum credit average in a quantitative discipline such as engineering, computer science, information technology, mathematics, statistics, transport, physics, business or finance or any honours bachelor's degree from the University of Sydney.

Alternatively, you need to hold a Graduate Diploma in Complex Systems from the University of Sydney with a credit average or qualifications deemed equivalent by the University.

Learn more

For more information on the course structure, including specialisations and unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Complex Systems with a specialisation in Engineering

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| STAT5002 | Core: Introduction to Statistics | 1 | 6 |
| PMGT5886 | Core: System Dynamics Modelling for PM | 1 | 6 |
| ENVI5801 | Core: Social Science of Environment | 1 | 6 |
| CSYS5010 | Core: Introduction to Complex Systems | 1 | 6 |
| CSYS5030 | Core: Self-Organisation and Criticality | 2 | 6 |
| COMP5048 | Core: Visual Analytics | 2 | 6 |
| ELEC9103 | Elective: Simulations and Numerical Solutions in Engineering | 2 | 6 |
| HTIN5001 | Core: Nature of Systems | 2 | 6 |
| Year 2 | | | |
| CSYS5050 | Capstone: Complex Systems Capstone Project A | 1 | 6 |
| CSYS5020 | Core: Interdependent Civil Systems | 1 | 6 |
| COMP5313 | Core: Large Scale Networks | 1 | 6 |
| ELECT5208 | Elective: Intelligent Electricity Networks | 1 | 6 |
| PMGT5875 | Elective: Project Innovation Management | 2 | 6 |
| CSYS5051 | Capstone: Complex Systems Capstone Project B | 2 | 6 |
| CHNG9204 | Core: Chemical and Biological Systems Behaviour | 2 | 6 |
| PMGT5897 | Elective: Disaster Project Management | 2 | 6 |

Indicative progression based on a 72 credit point master's degree with a Semester 1 enrolment.

Master of Engineering

A specialised program for qualified engineers seeking to move into a management role.

This program is designed to help qualified engineers strengthen their management capability and technical expertise. Qualified engineers looking to specialise or update their skills could also consider this program.

Course structure

This program comprises core units of study along with electives to broaden your knowledge. You will complete a sequence of specialist units that comprise a major in your chosen field. This course has a strong focus on project work to enhance self-directed learning.

Majors

The Master of Engineering allows you to build on your existing engineering undergraduate degree by developing specialised technical knowledge in one of 14 engineering majors:

- automation and manufacturing systems engineering
- biomedical engineering
- chemical and biomolecular engineering
- civil engineering
- electrical engineering
- fluids engineering
- geomechanical engineering
- mechanical engineering
- power engineering
- risk management
- software engineering
- structural engineering
- sustainability and environmental engineering
- telecommunications engineering.

Course duration

1.5 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. For more details, see the illustration on page 10.

Available courses

This program can be taken at the level of a master's degree, graduate diploma or graduate certificate, as below.

| Course name | Credit points | Duration (full time) |
|-------------------------------------|---------------|----------------------|
| Master of Engineering | 72 | 1.5 years |
| Graduate Diploma in Engineering | 36 | 1 year |
| Graduate Certificate in Engineering | 24 | 0.5 years |



Admission requirements

To apply for this degree, you need to have a recognised Bachelor of Engineering degree in the same or a similar field of study to the major for which you are applying, with at least a credit average.

Alternatively, you need to hold a Graduate Diploma in Engineering from the University of Sydney, with at least a credit average. If you don't meet these criteria, you may be considered for entry into the Graduate Diploma in Engineering. If you achieve a credit average in the first semester, you can apply to transfer into the Master of Engineering.

Learn more

For more information on the course structure, including majors, visit

– sydney.edu.au/courses

“Engineers are creative people who find solutions to problems before society often realises we have them.”

Professor Branka Vucetic

Director of the Centre of Excellence in Telecommunications



Indicative course progression

Example progression for Master of Engineering with a major in Risk Management

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| ENGG5102 | Core: Entrepreneurship for Engineers | 1 | 6 |
| ENGG5202 | Core: Sustainable Design, Engineering and Management | 1 | 6 |
| AMME5105 | Specialist: Risk Management Analysis | 1 | 6 |
| PMGT5891 | Specialist: Project Risk Management | 1 | 6 |
| ENGG5103 | Core: Safety Systems and Risk Analysis | 2 | 6 |
| PMGT5871 | Core: Project Process Planning and Control | 2 | 6 |
| CHNG9306 | Specialist: Management of Industrial Systems | 2 | 6 |
| AMME5020 | Research: Capstone Project A | 2 | 6 |
| Year 2 | | | |
| AMME5021 | Research: Capstone Project B | 1 | 6 |
| AMME5104 | Specialist: Applied Safety Systems and Risk Analysis | 1 | 6 |
| MECH5416 | Elective: Advanced Design and Analysis | 1 | 6 |
| AMME5101 | Elective: Energy and the Environment | 1 | 6 |

Indicative progression based on a 72 credit point master's degree with a Semester 1 enrolment.



Fast track your Master of Engineering

The Master of Engineering will allow you to build on your existing engineering undergraduate degree by developing specialised technical knowledge in your chosen major.

If you have the equivalent of an Australian Bachelor of Engineering degree in the same field of engineering as your intended specialisation and earned a distinction average (75 percent), then you can credit these studies to the master's degree, to fast track it.

This is called recognition of prior learning (RPL) and means you won't have to repeat similar units and could graduate sooner (see the diagram below).

For more information on RPL, see – sydney.edu.au/study/credit

Graduate diploma and certificate options are available if you do not wish to undertake a master's degree. They are available as exit options in circumstances where the master's degree cannot be completed.

For qualifications outside Australia (or where grading systems differ) the University determines equivalencies and entry requirements based on the country, institution and qualification. The entry scores listed in this guide are based on the University of Sydney grading system.

– sydney.edu.au/students/guide-to-grades

Note:

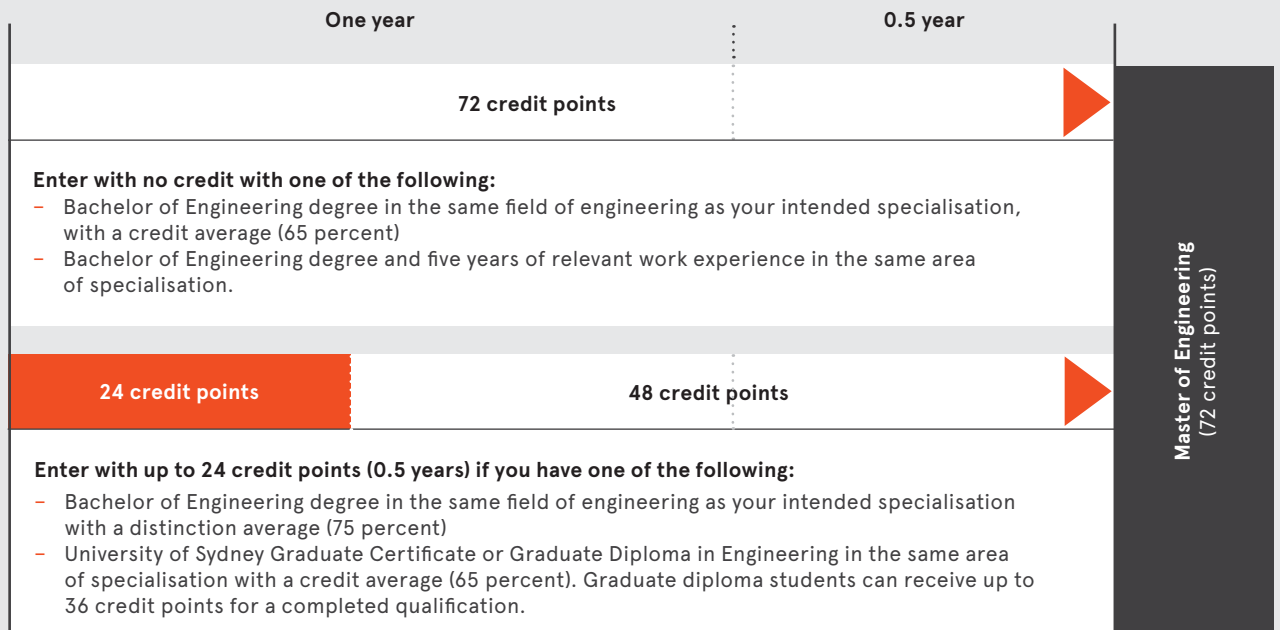
Qualifications must be assessed as equivalent to the relevant Australian Qualifications Framework level.

This is only a guide to RPL. All RPL granted is subject to faculty assessment and approval.

Qualifications completed more than 10 years ago will not be accepted.

You should make an application for RPL at the time of applying for the Master of Engineering degree.

Master of Engineering (1.5 years/72 credit points)



Master of Professional Engineering

Acquire a solid foundation for a career in engineering, a qualification in high demand around the world.

If you would like to change careers and become an engineer, obtain accredited qualifications that will enable you to practise in Australia and overseas, or simply move into a different field of engineering, you might like to consider this master's program.

It will provide you with the engineering professional practice and research skills that lead to recognition as an Australian graduate engineer. Your qualifications will be recognised internationally through the Washington Accord of the International Engineering Alliance.

Course structure

This program comprises foundation units, elective units in the area of your specialisation and a 12-week practical industry experience component. You can also choose from several professional electives and complete a capstone project in your final year.

This degree will develop sound communication, management and decision-making capabilities necessary to interpret and discuss complex issues in your area of specialisation.

Specialisations

The following specialisations are fully accredited by Engineers Australia, the national accreditation body.

- biomedical engineering
- chemical and biomolecular engineering
- civil engineering
- electrical engineering
- mechanical engineering
- power engineering
- structural engineering
- telecommunications engineering.

The specialisations below are provisionally accredited by Engineers Australia:

- aerospace engineering
- fluids engineering
- geomechanical engineering
- software engineering.

Course duration

3 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. For more details, see the illustration on page 13.

Available courses

This program can be taken at the level of a master's degree only.

| Course name | Credit points | Duration (full time) |
|------------------------------------|---------------|----------------------|
| Master of Professional Engineering | 144 | 3 years |



Admission requirements

You need to have a recognised bachelor's degree in engineering, science or applied science with at least an honours, honours equivalent or 68.5 percent average, and sufficient tertiary knowledge of mathematics and science-based units, depending on your chosen specialisation.

Learn more

For more information on the course structure, including specialisations and unit of study descriptions, visit

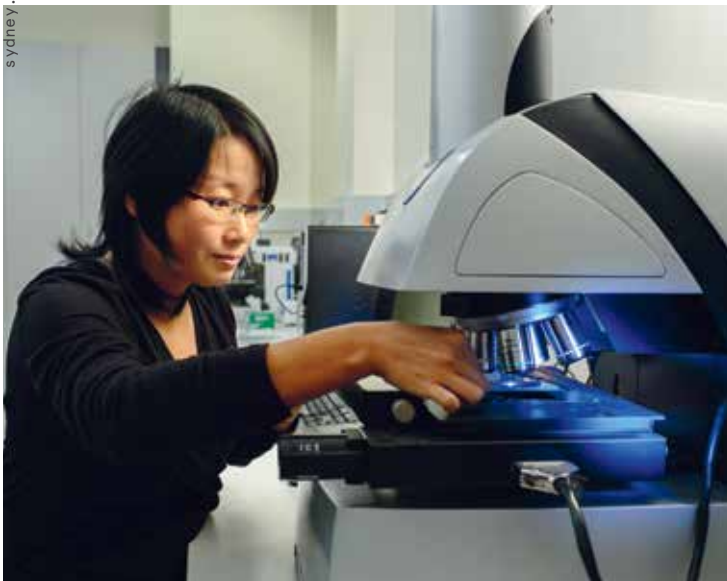
– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Professional Engineering with a specialisation in Civil Engineering

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| ENG9802 | Core: Engineering Mechanics | Sum | 6 |
| CIVL9110 | Core: Materials | 1 | 6 |
| CIVL9201 | Core: Structural Mechanics | 1 | 6 |
| CIVL9700 | Core: Transport Systems | 1 | 6 |
| GEO1501 | Core: Engineering Geology 1 | 2 | 6 |
| CIVL9401 | Core: Soil Mechanics | 2 | 6 |
| CIVL9611 | Core: Introductory Fluid Mechanics | 2 | 6 |
| CIVL9810 | Core: Engineering Construction and Surveying | 2 | 6 |
| Year 2 | | | |
| ENGG5204 | Core: Engineering Professional Practice | 1 | 6 |
| CIVL9205 | Core: Concrete Structures 1 | 1 | 6 |
| CIVL9612 | Core: Fluid Mechanics | 1 | 6 |
| CIVL5351 | Elective: Geoenvironmental Engineering | 1 | 6 |
| ENGG5205 | Core: Professional Practice in Project Management | 2 | 6 |
| CIVL9206 | Core: Steel Structures 1 | 2 | 6 |
| CIVL9811 | Core: Engineering Design and Construction | 2 | 6 |
| CIVL9235 | Elective: Structural Analysis | 2 | 6 |
| Year 3 | | | |
| CIVL5020 | Core: Capstone Project A | 1 | 6 |
| ENGG5217 | Core: Practical Experience | 1 | 0 |
| CIVL9903 | Core: Civil Engineering Design | 1 | 6 |
| CIVL6452 | Elective: Foundation Engineering | 1 | 6 |
| CIVL6666 | Elective: Open Channel Flow and Hydraulic Structures | 1 | 6 |
| CIVL5021 | Core: Capstone Project B | 2 | 6 |
| CIVL5453 | Elective: Geotechnical Hazards | 2 | 6 |
| CIVL6454 | Elective: Rock Engineering | 2 | 6 |
| CIVL6268 | Elective: Structural Dynamics | 2 | 6 |

Indicative progression based on a 144 credit point master's degree with a Summer School (Main) enrolment.



Fast track your Master of Professional Engineering

The Master of Professional Engineering is designed for those students wanting to change careers and become an accredited engineer to practise in Australia and overseas, or those wanting to move into a different field of engineering.

The course is available to graduates with a Bachelor of Engineering degree or a non-engineering bachelor's degree, with studies equivalent to one year of full-time study (or 48 credit points) in mathematics, physics, chemistry, biology, geology, computing or statistics, as they relate to your intended

specialisation. You may be able to credit previous engineering or non-engineering studies, to help fast track your master's degree. This is called recognition of prior learning (RPL) and means you won't have to repeat similar units and could graduate sooner (see the diagram below).

For more information on RPL, see
[- sydney.edu.au/study/credit](https://sydney.edu.au/study/credit)

For qualifications outside Australia or where grading systems differ, the University determines equivalencies and entry requirements based on the country, institution and

qualification. The entry scores listed in this guide are based on the University's grading system.

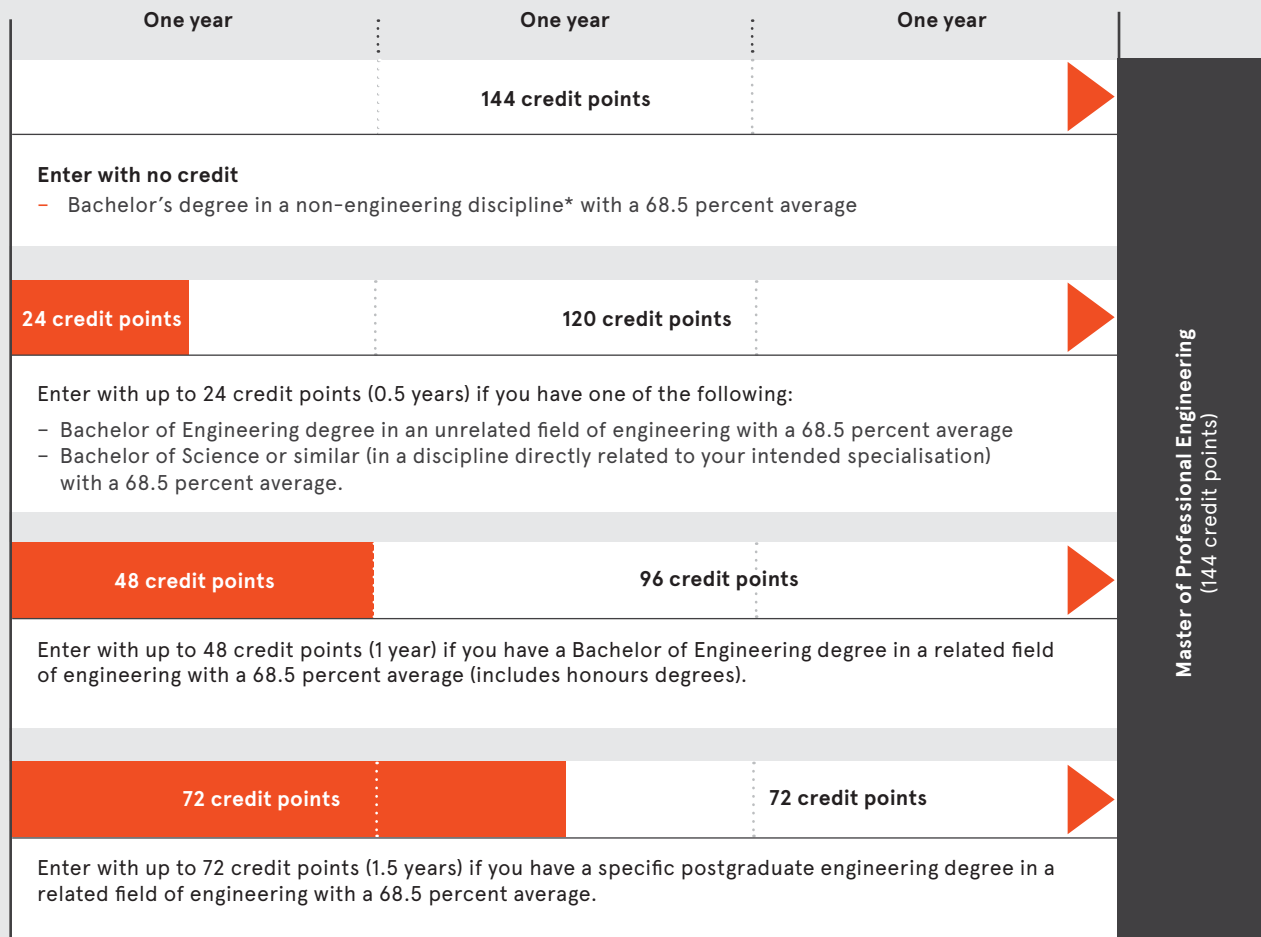
[- sydney.edu.au/students/guide-to-grades](https://sydney.edu.au/students/guide-to-grades)

Note:
 Qualifications must be assessed as equivalent to the relevant Australian Qualifications Framework level.

This is only a guide to RPL. All RPL granted is subject to faculty assessment and approval.

Qualifications completed more than 10 years ago will not be accepted.

Master of Professional Engineering (3 years/144 credit points)



* This degree should contain studies equivalent to a minimum of one year in mathematics, physics, chemistry, biology, geology, computing or statistics, as related to the intended engineering specialisation.

Master of Project Leadership

Learn how to establish and tailor sophisticated interdependent project frameworks, as well as the high-level concepts of open-systems innovation, dynamic social networks and design thinking.

This professional degree is designed for experienced project managers and senior managers with a minimum of five years work experience, seeking to develop the complex systems thinking and communication skills required of successful organisational leadership.

An innovative and challenging program, this master's degree will develop your strategic thinking capability and take you beyond conventional concepts of leadership, management, governance, risk, resilience and sustainability.

You will focus on the importance of interpersonal skills for effective leadership, and learn how to apply the principles of emotional intelligence to influence and achieve successful project outcomes.

Course structure

The course comprises core project leadership units of study along with your chosen electives. This can be completed on campus or entirely online. To accommodate your professional commitments, our flexible study options include block or intensive mode, evening classes and online, or you can choose a combination of these options.

Course duration

1 year full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.

Available courses

This program can be taken at the level of a master's degree, graduate diploma or graduate certificate.

| Course name | Credit points | Duration (full time) |
|--|---------------|----------------------|
| Master of Project Leadership | 48 | 1 year |
| Graduate Diploma in Project Leadership | 36 | 1 year |
| Graduate Certificate in Project Leadership | 24 | 0.5 years |

Admission requirements

To apply for this degree you need to have a recognised bachelor's degree in any discipline, with a credit average (65 percent). Alternatively, you need to hold a Graduate Diploma in Project Leadership from the University of Sydney, with a credit average. Both options require at least five years' work experience in a middle or senior management role.

Learn more

For more information on the course structure, including unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Project Leadership

| Unit code | Unit of study | Sem | CP |
|-----------|---|-----|----|
| Year 1 | | | |
| PMGT5860 | Core: Project Leadership Thesis A | 1 | 6 |
| PMGT5875 | Core: Project Innovation Management | 1 | 6 |
| PMGT5898 | Core: Complex Project Leadership | 1 | 6 |
| PMGT6891 | Core: Risk Dynamics and Resilience | 1 | 6 |
| PMGT5861 | Core: Project Leadership Thesis B | 2 | 6 |
| PMGT5896 | Core: Sustainability and Intelligence in PM | 2 | 6 |
| PMGT5897 | Core: Disaster Project Management | 2 | 6 |
| PMGT6871 | Elective: Project Planning and Governance | 2 | 6 |

Indicative progression based on a 48 credit point master's degree with a Semester 1 enrolment.



“This program looks at projects and leadership from the most innate levels. You’ll explore coordination theory, complex adaptive systems, emotional intelligence and sustainability. Delving into these concepts at an academic level, you start to understand the foundations of success for large and complex projects.”

Christian Porter
Master of Project Leadership
General Manager, Strategic Bidding,
Downer



Master of Project Management

This professional qualification will provide you with a sound educational platform for a career in project management.

You will gain the advanced skills you need for hands-on management of projects and is an ideal complement to your on-the-job experience.

This master's degree will also equip you with the fundamental methodologies, modelling and analytical techniques for the design and implementation of projects across a wide range of industries including infrastructure, mining, manufacturing, IT, finance, law and consultancy.

You will also have the opportunity to undertake an international study tour, working with students from other leading international universities.

Course structure

The course comprises core project management units of study along with your chosen electives. This can be completed on campus, entirely online, or a mix of both.

To accommodate your professional commitments, our flexible study options include block or intensive mode, evening classes and online delivery, or you can choose a combination of options.

Specialisations

These include:

- global
- organisational project management
- portfolio and program
- risk and control
- strategic change implementation
- sustainability.

We also offer an embedded research pathway for candidates interested in pursuing a research degree after completion of the Master of Project Management.

Your experience counts

If you have relevant industry experience, you can choose to take one (or more) of our advanced practitioner units of study.

This will allow you to work in small groups, sharing your knowledge and expertise with fellow professionals.

There are a variety of advanced practitioner units of study to choose from, including:

- PMGT6871 Project Planning and Governance
- PMGT6872 Project Leadership and Communications
- PMGT6873 Project Economics and Investment

- PMGT6891 Risk Dynamics and Resilience
- PMGT6812 Integrated Project Delivery Approaches

Course duration

1.5 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.

Embedded courses

This program can be taken at the level of a master's degree, graduate diploma or graduate certificate.

| Course name | Credit points | Duration (full time) |
|--|---------------|----------------------|
| Master of Project Management | 72 | 1.5 year |
| Graduate Diploma in Project Management | 48 | 1 year |
| Graduate Certificate in Project Management | 24 | 0.5 years |

Admission requirements

To apply for this degree, you need to have a recognised bachelor's degree in any discipline with a credit average (65 percent). Alternatively, you need to hold a Graduate Diploma in Project Management from the University of Sydney, with a credit average.

If you don't meet these criteria but hold a bachelor's degree, you may be considered for entry into the Graduate Diploma in Project Management. After achieving a credit average in four units of study in this program, you can apply to transfer into the Master of Project Management.

Applicants without a bachelor's degree who have three years' project management experience may apply for the Graduate Certificate in Project Management.

Learn more

For more information on the course structure, including specialisations and unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Project Management with a specialisation in Strategic Change Implementation

| Unit code | Unit of study | Sem | CP |
|---------------|---|-----|----|
| Year 1 | | | |
| ENGG5205 | Core: Professional Practice in Project Management | 1 | 6 |
| ENGG5811 | Core: Critical and Systems Thinking | 1 | 6 |
| ENGG5820 | Core: Applied Project Management | 1 | 6 |
| PMGT6867 | Core: Quantitative Methods: Project Management | 1 | 6 |
| PMGT5871 | Core: Project Process Planning and Control | 2 | 6 |
| PMGT5872 | Core: People and Leadership | 2 | 6 |
| ENGG5812 | Capstone: Project Delivery Approaches | 2 | 6 |
| PMGT5876 | Elective: Strategic Delivery of Change | 2 | 6 |
| Year 2 | | | |
| PMGT5850 | Capstone: Project Management Capstone Project | 1 | 6 |
| PMGT5873 | Core: Project Economics and Finance | 1 | 6 |
| PMGT5891 | Core: Project Risk Management | 1 | 6 |
| PMGT5875 | Elective: Project innovation Management | 1 | 6 |

Indicative progression based on a 72 credit point master's degree with a Semester 1 enrolment.



Fast track your Master of Project Management

Students have the opportunity to complete a Master of Project Management in one year.

If you have three years or more of project management-related experience, you may apply for recognition of prior learning (RPL) and are eligible to attend classes with other experienced practitioners.

Indicative course progression

Example progression with RPL applied for Master of Project Management with a specialisation in Strategic Change Implementation

| Unit code | Unit of study | Sem | CP |
|---------------|---|-----|----|
| Year 1 | | | |
| PMGT5875 | Elective: Project Innovation Management | 1 | 6 |
| PMGT6872 | Core: Project Leadership and Communications | 1 | 6 |
| ENGG5812 | Research: Project Delivery Approaches | 1 | 6 |
| PMGT5876 | Elective: Strategic Delivery of Change | 1 | 6 |
| PMGT5850 | Capstone: Project Management Capstone Project | 2 | 6 |
| PMGT6871 | Core: Project Planning and Governance | 2 | 6 |
| PMGT6873 | Core: Project Economics and Investment | 2 | 6 |
| PMGT6891 | Core: Risk Dynamics and Resilience | 2 | 6 |

Indicative progression based on a 48 credit point master's degree with a Semester 1 enrolment.

Master of Data Science

Drive business decision-making or research output by drawing meaningful knowledge from data with this professional degree.

Data is a vital asset to an organisation. It provides valuable insights into areas such as customer behaviour, market intelligence and operational performance. Data scientists build intelligent systems to manage, interpret, understand and derive key knowledge from data.

For those with strong mathematical or quantitative backgrounds, this degree will apply your analytical and technical skills to data science, guiding strategic decisions in your area of expertise. You can tailor your learning to your professional and personal interests.

Leveraging the University's research strengths, you will explore the latest in data mining, machine learning and data visualisation, while developing the skills to communicate data insights to key stakeholders effectively.

Course structure

The course comprises four core units, two elective units and a capstone project in which you will apply your skills to a real-world data science problem. You can tailor your degree by selecting elective units and a project that complement your particular interests, background and qualifications.

The Graduate Certificate in Data Science comprises the following four core units:

- COMP5310 Principles of Data Science
- STAT5002 Introduction to Statistics
- COMP9120 Database Management Systems
- COMP9007 Algorithms.

You can select elective units from the following data science subjects, or from other disciplines relevant to your background and qualifications.

- COMP5338 Advanced Data Models
- COMP5328 Advanced Machine Learning
- COMP5349 Cloud Computing
- COMP5425 Multimedia Retrieval
- INFO5060 Data Analytics and Business Intelligence
- COMP5329 Deep Learning
- COMP5046 Natural Language Processing
- QBUS6840 Predictive Analytics.

Course duration

1 to 1.5 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.

Available courses

Two separate courses are available, with a foundational graduate certificate leading into a master's degree.

| Course name | Credit points | Duration (full time) |
|--------------------------------------|---------------|----------------------|
| Master of Data Science | 48 | 1 year |
| Graduate Certificate of Data Science | 24 | 0.5 years |



Admission requirements

To apply for this degree, you need to have a bachelor's degree with honours and at least a credit average in a quantitative discipline such as computer science, mathematics, statistics, engineering, physics, economics or finance from a recognised Australian or overseas university; or qualifications deemed equivalent by the University.

For those with qualifications in other areas such as health and education, a Graduate Certificate in Data Science can provide you with the data science capability to complement your existing skills and provide a pathway to the master's program.

Learn more

For more information on the course structure, including unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Data Science

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| COMP5310 | Core: Principles of Data Science | 1 | 6 |
| COMP5318 | Core: Machine Learning and Data Mining | 1 | 6 |
| COMP5349 | Elective: Cloud Computing | 1 | 6 |
| COMP5329 | Elective: Deep Learning | 1 | 6 |
| COMP5048 | Core: Visual Analytics | 2 | 6 |
| STAT5003 | Core: Computational Statistical Methods | 2 | 6 |
| COMP5703 | Project: Information Technology Capstone Project | 2 | 12 |

Indicative progression based on a 48 credit point master's degree with a Semester 1 enrolment.



“Data is the currency of the new digital age. It presents incredible opportunities to create smarter cities, healthier people and a better environment for all of us. The challenge is how you make use of it, through data analytics and data science, and that’s what this course is all about.”

Professor Hugh Durrant-Whyte

Professor, ARC Federation Fellow
Director, Centre for Translational
Data Science
Chief Scientific Adviser, UK Ministry
of Defence

Master of Health Technology Innovation

If you are a health practitioner, engineer, IT professional or scientist, this unique program will equip you with the skills to deliver improved health outcomes for patients through the innovative use of health technologies.

Healthcare solutions are increasingly dependent on the innovative use of modern technologies. The Master of Health Technology Innovation is an ideal professional degree if you are seeking to expand your career options and take advantage of exciting opportunities in this emerging field.

Recognising the changing healthcare landscape, the program will help you bridge the gap between the technical and clinical arenas by working alongside engineers, IT specialists and health professionals on cross-disciplinary projects in the University's flagship Charles Perkins Centre.

Our teachers are leaders in health, engineering and technology from across the University and its extensive network of hospitals and healthcare facilities.

Course structure

The course comprises core units, foundation units, specialist units and a capstone project. You can choose units that complement your particular background and qualifications. To accommodate your professional commitments, our flexible study options include block or intensive mode, evening classes and online modules, or you can choose a combination of options.

Course duration

2 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.

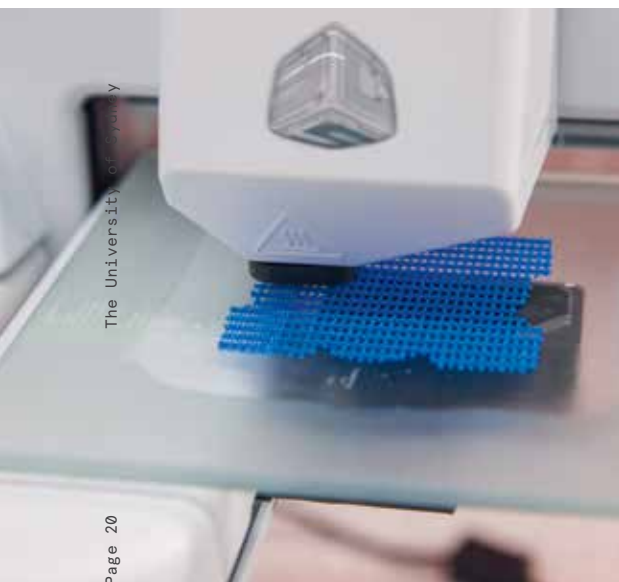
Available courses

This program can be taken at the level of a master's degree or graduate diploma.

| Course name | Credit points | Duration (full time) |
|--|---------------|----------------------|
| Master of Health Technology Innovation | 96 | 2 years |
| Graduate Diploma in Health Technology Innovation | 60 | 1.5 years |

“Technological advancement and innovation are driving significant change in the health sector. I see substantial opportunities for graduates who have both the technical expertise and medical knowledge to lead this advancement.”

Klaus Schindhelm
Chief Research Officer, ResMed





Admission requirements

To apply for this degree, you need to have a recognised bachelor's degree with at least a credit average from the University of Sydney or equivalent qualifications.

Alternatively, for those who do not meet the required qualifications for this master's, you may wish to consider the Graduate Diploma in Health Technology Innovation as a pathway to the master's program.

Learn more

For more information on the course structure, including unit of study descriptions, visit

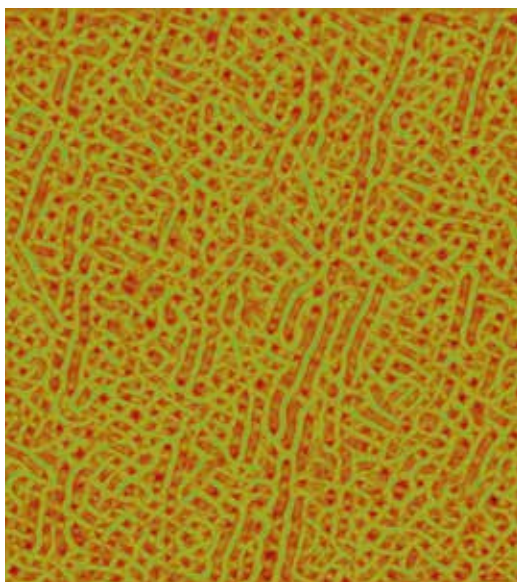
– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Health Technology Innovation

| Unit code | Unit of study | Sem | CP |
|---------------|---|-----|----|
| Year 1 | | | |
| HTIN5001 | Core: Nature of Systems | 1 | 6 |
| HTIN5004 | Core: Integrated Approaches to Chronic Disease | 1 | 6 |
| MRTY5132 | Foundation: Medical Image Perception | 1 | 6 |
| PUBH5018 | Foundation: Introductory Biostatistics | 1 | 6 |
| HTIN5002 | Core: Quality Frameworks for Health Innovation | 2 | 6 |
| HTIN5003 | Core: Health Technology Evaluation | 2 | 6 |
| COMP5310 | Foundation: Principles of Data Science | 2 | 6 |
| COMP5318 | Specialist: Machine Learning and Data Mining | 2 | 6 |
| Year 2 | | | |
| PUBH5010 | Foundation: Epidemiology Methods and Uses | 1 | 6 |
| CLTR5001 | Specialist: Trial Design and Methods | 1 | 6 |
| COMP5424 | Specialist: Information Technology in Biomedicine | 1 | 6 |
| HTIN6011 | Project: Health Technology Innovation Capstone A | 1 | 6 |
| MRTY5133 | Specialist: Medical Image Optimisation | 2 | 6 |
| BETH5203 | Specialist: Ethics and Public Health | 2 | 6 |
| PUBH5422 | Specialist: Health and Risk Communication | 2 | 6 |
| HTIN6012 | Project: Health Technology Innovation Capstone B | 2 | 6 |

Indicative progression based on a 96 credit point master's degree with a Semester 1 enrolment.



Polar shading gradients computed for an image of the subbasal corneal nerve plexus

Master of Information Technology

A degree designed for IT professionals looking to update and extend their technical knowledge of advanced computing subjects or move into a new IT specialisation.

This internationally recognised degree can help advance your career in diverse fields such as software engineering, health informatics, data management, data analysis and more. It is also an excellent retraining opportunity for professionals who want to specialise in a different area of IT.

You have the flexibility to tailor your studies, with more than 25 IT specialist units of study as well as units from electrical engineering and business.

Course structure

The course comprises core units, specialist units, optional electives and a capstone project. You have the option to focus on one particular area or combine subjects from related specialisations.

Specialisations

These include:

- software engineering
- data management and analytics
- digital media technology
- biomedical and health informatics
- networks and distributed systems
- IT security.

Classes are generally held in the evening to accommodate your professional commitments.

We also offer a pathway for eligible candidates planning to pursue a research degree.

Course duration

1.5 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.



Available courses

This program can be taken at the level of a master's degree, graduate diploma or graduate certificate.

| Course name | Credit points | Duration (full time) |
|--|---------------|----------------------|
| Master of Information Technology | 72 | 1.5 years |
| Graduate Diploma in Information Technology | 48 | 1 year |
| Graduate Certificate in Information Technology | 24 | 0.5 years |

Admission requirements

To apply for this degree, you need to hold a bachelor's degree in information technology, computer science, or computer or software engineering from a recognised Australian or overseas university, with at least a credit average.

If you don't meet these criteria, you may be eligible for entry into the Graduate Diploma in Computing, from which you can transfer into the Master of Information Technology after satisfactorily completing at least 24 credit points with a credit average (65 percent).

Learn more

For more information on the course structure, including specialisations and unit of study descriptions, visit

– sydney.edu.au/courses



“The knowledge and skills I acquired in my graduate studies have been invaluable for my professional work. The Master of Information Technology has been an excellent investment in my development and will be crucial to realising my professional and academic goals.”

James Charters
Master of Information Technology

Indicative course progression

Example progression for Master of Information Technology in IT Security

| Unit code | Unit of study | Sem | CP |
|---------------|---|-----|----|
| Year 1 | | | |
| INFO5990 | Core: Professional Practice in IT | 1 | 6 |
| INFO5301 | Specialist: Information Security Management | 1 | 6 |
| INFO6007 | Core: Project Management in IT | 1 | 6 |
| ELEC5616 | Specialist: Computer and Network Security | 1 | 6 |
| CISS6022 | Specialist: Cybersecurity | 2 | 6 |
| COMP5617 | Specialist: Empirical Security Analysis and Engineering | 2 | 6 |
| COMP5618 | Specialist: Applied Cybersecurity | 2 | 6 |
| COMP5216 | Elective: Mobile Computing | 2 | 6 |
| Year 2 | | | |
| COMP5349 | Elective: Cloud Computing | 1 | 6 |
| INFO5992 | Core: Understanding IT Innovations | 1 | 6 |
| COMP5703 | Project: Information Technology Capstone Project | 1 | 12 |

Indicative progression based on a 72 credit point master's degree with a Semester 1 enrolment.

Master of Information Technology Management

Make the transition into management with this degree, specifically designed for IT professionals and technically skilled graduates.

This professional degree will prepare you to succeed in the management of areas that use information technology to manage and expand business endeavours. It will equip you with an in-depth understanding of key areas such as data analytics, business intelligence, IT strategy and IT project management.

This degree will also help you develop the skills to manage the design, delivery and operation of business technologies effectively.

It is designed for graduates seeking a career path into management roles such as IT project manager, program manager, general manager of operations, chief information officer or chief technology officer.

Course structure

This course comprises core units, specialist units, electives and a capstone project. You can also choose a project that relates to your area of employment.

There are a variety of specialist units to choose from, including:

- COMP5206 Information Technologies and Systems
- ISYS5070 Change Management in IT
- INFO5301 Information Security Management
- INFO6010 Advanced Topics in IT Project Management
- INFO5991 Services Science Management and Engineering
- INFO6012 Information Technology Strategy and Value
- ISYS5050 Knowledge Management Systems
- INFO5060 Data Analytics and Business Intelligence.

Classes are generally held in the evening to accommodate your professional commitments.

We also offer a pathway for eligible candidates planning to pursue a research degree.

Course duration

1.5 years full time

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.

Available courses

This program can be taken at the level of a master's degree, graduate diploma or graduate certificate.

| Course name | Credit points | Duration (full time) |
|---|---------------|----------------------|
| Master of Information Technology Management | 72 | 1.5 years |
| Graduate Diploma in Information Technology Management | 48 | 1 year |
| Graduate Certificate in Information Technology Management | 24 | 0.5 years |





Admission requirements

To apply for this degree, you need to have a bachelor's degree in any aspect of IT, computer science, computer or software engineering from a recognised Australian or overseas university with at least a credit average (65 percent). Alternatively, you have completed a recognised bachelor's degree in any discipline with at least a credit average, along with a minimum two years of professional IT experience.

If you don't meet these criteria, you may be eligible for entry into the Graduate Diploma in Computing, from which you may transfer into the Master of Information Technology Management after satisfactorily completing at least 24 credit points with a credit average.

Learn more

For more information on the course structure, including unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Information Technology Management

| Unit code | Unit of study | Sem | CP |
|---------------|---|-----|----|
| Year 1 | | | |
| INFO5990 | Core: Professional Practice in IT | 1 | 6 |
| INFO5301 | Specialist: Information Security Management | 1 | 6 |
| INFO6007 | Core: Project Management in IT | 1 | 6 |
| ISYS5050 | Specialist: Knowledge Management Systems | 1 | 6 |
| COMP5206 | Specialist: Information Technologies and Systems | 2 | 6 |
| INFO6010 | Specialist: Advanced Topics in IT Project Management | 2 | 6 |
| INFO6012 | Specialist: Information Technology Strategy and Value | 2 | 6 |
| COMP5216 | Elective: Mobile Computing | 2 | 6 |
| Year 2 | | | |
| INFO5991 | Core: Understanding IT Innovations | 1 | 6 |
| INFO5992 | Specialist: Services Science Management and Engineering | 1 | 6 |
| COMP5703 | Project: Information Technology Capstone Project | 1 | 12 |

Indicative progression based on a 72 credit point master's degree with a Semester 1 enrolment.

Master of Information Technology/ Master of Information Technology Management

Develop your technical and management skills specific to technology with this combined degree for IT professionals and graduates.

This program will improve your understanding of the latest advancements in IT and how to use them to help drive organisational transformation.

The degree's accelerated two-year structure gives you the opportunity to undertake specialist study in a range of IT-related disciplines along with a program in IT management. It will deepen your technical knowledge of complex IT environments while developing your ability to manage the design, delivery and operation of business technologies.

Course structure

The course comprises four core units, technical and managerial specialist units, electives and a compulsory capstone project.

Classes are generally held in the evening to accommodate your professional commitments.

Specialisations

You can choose to specialise in a number of areas within IT, including:

- biomedical and health informatics
- data management and analytics
- digital media technology
- IT security
- networks and distributed systems
- software engineering.

In addition, IT management subjects will provide advanced training in key management areas including innovation, security, services science and change management.

Course duration

2 years full time

This accelerated program combines elements from the two master's programs into a streamlined course. This means you can achieve the same learning outcomes and graduate with a combined degree in two years instead of three.

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your degree. See page 3 for details.



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

Aviral Shukla

Master of Information Technology/

Master of Information Technology Management



Available courses

This program can be taken at the level of a combined master's degree only.

| Course name | Credit points | Duration (full time) |
|--|---------------|----------------------|
| Master of Information Technology/ Master of Information Technology Management | 96 | 2 years |

Admission requirements

To apply for this degree, you need to have a bachelor's degree in information technology, computer science, computer or software engineering from a recognised Australian or overseas university with at least a credit average (65 percent).

Learn more

For more information on the course structure, including specialisations and unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Master of Information Technology/Master of Information Technology Management (combined), with a specialisation in Software Engineering

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| COMP5206 | Core: Information Technologies and Systems | 1 | 6 |
| ELEC5618 | MIT Specialist: Software Quality Engineering | 1 | 6 |
| COMP5347 | MIT Specialist: Web Application Development | 1 | 6 |
| COMP9113 | MIT Specialist: Software Development in Java | 1 | 6 |
| COMP5427 | MIT Specialist: Usability Engineering | 2 | 6 |
| INFO5990 | Core: Professional Practice in IT | 2 | 6 |
| INFO6012 | MITM Specialist: Information Technology Strategy and Value | 2 | 6 |
| INFO5991 | MITM Specialist: Services Science Management and Engineering | 2 | 6 |
| Year 2 | | | |
| COMP5348 | MIT Specialist: Enterprise Scale Software Architecture | 1 | 6 |
| COMP5349 | MIT Specialist: Cloud Computing | 1 | 6 |
| INFO6007 | Core: Project Management in IT | 1 | 6 |
| INFO5301 | MITM Specialist: Information Security Management | 1 | 6 |
| INFO5992 | Core: Understanding IT Innovations | 2 | 6 |
| INFO6010 | MITM Specialist: Advanced Topics in IT Project Management | 2 | 6 |
| COMP5703 | Project: Information Technology Capstone Project | 2 | 12 |

Indicative progression based on a 96 credit point master's degree with a Semester 1 enrolment.

Research

At the University of Sydney, we are tripling our investment in research by 2020 to change the way we think about the world and how we live and work in it.



We are one of the world's top research universities and a member of Australia's prestigious Group of Eight network and the Association of Pacific Rim Universities. The latter partners us with others that excel in research, including Stanford, UCLA, Shanghai Jiao Tong University and the University of Hong Kong.

Our research is shaped by the big picture. We look at real-world problems from all angles, combining the expertise and talents of scholars from many disciplines.

This collaborative spirit drives our interdisciplinary research centres, including several dedicated to deepening our understanding of China and Southeast Asia, and increasing Australia's engagement in these regions. We're home to more than 90 research and teaching centres and we have a proud track record of excellence.

Find out more about our current research:

– sydney.edu.au/research

We are investing in major new facilities to support collaboration and partnerships with researchers from diverse disciplines who are tackling society's most challenging problems.

World standard research

The Australian Government ranked all of our research at world standard or above in its latest Excellence in Research for Australia ratings.

Our research degrees

Embarking on a research degree at the University of Sydney is an opportunity to work alongside some of the world's brightest and most accomplished academics. We offer exceptional facilities – the latest innovative technology across the physical, medical, life and engineering sciences, the humanities and social sciences.

Learn more about the University's research degrees:

– sydney.edu.au/study/pg-research

The Faculty of Engineering and Information Technologies has identified the following as strategic research themes:

- field robotics
- agricultural engineering
- biomedical engineering and technologies
- human-centred technology
- complex systems
- materials and structures
- food processing
- data science
- clean, intelligent energy networks
- water and the environment.

You can pursue research through a Master of Philosophy (MPhil) or a Doctor of Philosophy (PhD).



Master of Philosophy (MPhil)

This master's program allows candidates to undertake research and advanced specialisation in any area of scholarship or design covered by the faculty.

Entry requirements include a bachelor's degree – generally a four-year degree or a three-year degree with honours in a relevant discipline.

The program is typically completed in four semesters of full-time study (two years) or eight semesters of part-time study (four years).

Doctor of Philosophy (PhD)

This degree is awarded for a thesis that is a substantial and original contribution to the discipline. Entry requirements include a master's degree with a research component or a bachelor's degree with first or second-class honours.

Alternatively, you may be able to upgrade from the Master of Philosophy program, providing you have made satisfactory progress.

Candidates usually complete the PhD within three years full time or six years of part-time study (part time is available to domestic students only). You will need to produce a final thesis in the range of 50,000 to 80,000 words.

Supporting our researchers

At the faculty, we support our researchers to excel in their chosen field in various ways, from providing strategic advice on research opportunities to assisting with accessing funding.

We also help you to develop transferable skills in research leadership and management, commercialisation, communication and cross-disciplinary capabilities.

Scholarships

We offer various scholarships and other forms of financial assistance to help you achieve your personal and professional goals. View all our scholarship opportunities at

- sydney.edu.au/scholarships
- sydney.edu.au/engineering/scholarships

“We have been conducting research in autonomous remote sensing and developing robotics and intelligent software for the environment and agriculture community for more than a decade. We are working on a project with AUSVEG and Horticulture Innovation Australia to develop small, affordable robotic farming devices to give farmers tools to help better manage their farms.”

Professor Salah Sukkarieh

Director of Research and Innovation at the Australian Centre for Field Robotics



Graduate Diploma in Computing

Move into the IT industry or enhance your existing career with the Graduate of Diploma in Computing. This technology-based qualification suits non-IT graduates looking to upskill.

This program will provide you with a strong foundation in IT. You can explore a range of specialist IT areas that can then form the basis of your new career in IT. Or you may wish to deepen your specialisation with further study.

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.

Course structure

In four foundation units this program covers core knowledge of information technology including programming, data management, system analysis and modelling, and networking. You can then choose an additional six IT or IT management specialist units to complete the diploma.

Classes are generally held in the evening to accommodate your professional commitments.

Course duration

1.5 years full time

If you are interested in pursuing further study, you may apply for direct transfer to the Master of Information Technology or Master of Information Technology Management after completing the four foundation units with a credit average.

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL) that can reduce the length of your diploma. See page 3 for details.

Admission requirements

To apply for this program, you need to have a recognised bachelor's degree, including units of study with a mathematical foundation demonstrating significant numeracy skills, with at least a credit average (65 percent).

Alternatively, if you can demonstrate evidence of prior learning that is considered to demonstrate the knowledge and aptitude required to undertake this course, or if you hold a non-degree qualification and have substantial professional IT development experience, you may be considered for entry. Admission is assessed on a case-by-case basis.

Learn more

For more information on the course structure, including unit of study descriptions, visit

– sydney.edu.au/courses

Indicative course progression

Example progression for Graduate Diploma in Computing

| Unit code | Unit of study | Sem | CP |
|---------------|--|-----|----|
| Year 1 | | | |
| COMP9110 | Foundation: System Analysis and Modelling | 1 | 6 |
| COMP9113 | Foundation: Software Development in Java | 1 | 6 |
| COMP9120 | Foundation: Database Management Systems | 1 | 6 |
| COMP9601 | Foundation: Computer and Network Organisation | 1 | 6 |
| COMP5206 | Specialist: Information Technologies and Systems | 2 | 6 |
| COMP5047 | Specialist: Pervasive Computing | 2 | 6 |
| COMP5216 | Specialist: Mobile Computing | 2 | 6 |
| COMP5427 | Specialist: Usability Engineering | 2 | 6 |
| Year 2 | | | |
| COMP5046 | Specialist: Web Application Development | 1 | 6 |
| COMP5405 | Specialist: Digital Media Computing | 1 | 6 |

Indicative progression based on a 60 credit point diploma with a Semester 1 enrolment.

How to apply

Coursework

To apply for postgraduate study by coursework, follow these steps:

Step 1

Choose a course

Search for the course you are interested in using our find a course website:

- sydney.edu.au/courses

Step 2

Check admission requirements

Select the program of study you wish to apply for and check that you meet the admission requirements, such as academic, English language, and course-specific requirements. These are explained in general terms at:

- sydney.edu.au/pg-entry

Step 3

Submit your application

Click the 'apply now' button to proceed with your application. You can also apply for recognition of prior learning which, if approved, can significantly reduce the length of your degree.

- sydney.edu.au/study/credit

Research

To apply for a research degree, follow these steps:

Step 1

Check entry requirements

To be eligible for admission to a postgraduate research degree, you usually need to have undertaken a significant research project or thesis in your previous university-level studies.

- sydney.edu.au/research-entry

Step 2

Find an academic supervisor

Our Research Supervisor Connect online portal lists all the University research opportunities currently available for new students.

Search through research ideas, read about supervisors' areas of interest and expertise, and make initial contact with them:

- sydney.edu.au/research/opportunities

Step 3

Develop a research proposal

Once you have spoken with an academic, you will 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 before you submit your application.

Step 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.

Step 5

Submit your application

We invite you to lodge your application online:

- search for your program of study at sydney.edu.au/courses
- select the degree for which you wish to apply
- click on the 'apply' button to begin the application process.

Need more information?

Domestic students

- sydney.edu.au/ask-domestic
1800 SYD UNI (1800 793 864)

International students

- sydney.edu.au/ask-international
+61 2 8627 1444 (outside Australia)



Fees and costs

Domestic students

Most domestic postgraduate students study in a fee-paying place, however, a limited number of Commonwealth supported places (CSPs) may be available for some courses, on a competitive basis. Refer to your specific course in sydney.edu.au/courses to determine if it offers CSPs.

Fee-paying students

The University calculates the tuition fees for single postgraduate coursework degrees based on an annual course fee that is subject to increase each year. Fees are based on a full-time student enrolment load of 24 credit points per semester, or 48 credit points per year (1.0 EFTSL). If your study load for the year is more or less than 1.0 EFTSL your tuition fee or student contribution amount will differ. Check the tuition fees for your specific course at sydney.edu.au/courses

The Australian Government does not subsidise fee-paying places. However, the government-funded loan program FEE-HELP is available to eligible domestic postgraduate coursework students to assist in paying your tuition fees. For more information, visit www.studyassist.gov.au

CSP students

Your tuition fees will be subsidised by the Australian Government. You will pay the remainder – called a ‘student contribution amount’ and set by the University for your particular study. Exact student contribution amounts for your course will depend on your calendar year of study and the specific units of study in which you enrol. Costs can vary depending on the discipline of study (student contribution band) and study load of each unit.

Student contribution amounts are reviewed annually by the University and will increase each year of your period of study (subject to an Australian Government-specified cap), effective at the start of each calendar year. Eligible CSP students can obtain a full or part HECS-HELP loan for their contribution. For details, visit www.studyassist.gov.au

Research Training Program

The government-funded Research Training Program provides funding for eligible domestic Higher Degree by Research candidates to cover the cost of their tuition fees for the duration of an accredited course. This can be up to four years full-time equivalent

study for a doctorate by research and two years of full-time equivalent study for a master’s degree by research. To find out more, visit sydney.edu.au/rtp

International students

The University calculates the tuition fees for postgraduate degrees based on an annual course fee that is subject to an increase each year. Tuition fees vary between courses and the calendar year that you undertake study. Fees are based on a full-time student enrolment load of 24 credit points per semester, or 48 credit points per year (1.0 EFTSL). If your study load for the year is more or less than 1.0 EFTSL your tuition fee will differ.

Annual review

Tuition fees are subject to annual review by the University and will increase each year, effective at the start of each calendar year.

Other costs to consider

- additional course costs, such as course-specific materials and textbooks, tools, protective clothing, and equipment. For more information, visit your faculty’s website: sydney.edu.au/faculties
- the Student Services and Amenities (SSA) fee: sydney.edu.au/ssa-fee
- living expenses such as food and rent: sydney.edu.au/study/living-costs

These costs are specific to international students:

- your first semester fee as a deposit
- health insurance through the Overseas Student Health Cover (OSHC) scheme; an Australian Government requirement for student visa holders: sydney.edu.au/pg-int-health
- an Application Processing Fee (unless you are eligible for a waiver): sydney.edu.au/study/tuition-fees
- education expenses for students’ children: schools.nsw.edu.au/international

Method of payment

There are several ways you can pay the fees that apply to your study. Please note that a surcharge of 0.8 percent will apply for payments made by Visa or MasterCard. The surcharge is subject to review and may change. Information about payment methods and the surcharge is explained at: sydney.edu.au/study/paying-your-fees

Important dates

Postgraduate Information Evening

17 May 2017

Semester 2, 2017 applications close

30 June 2017*

Open Day

26 August 2017

Postgraduate Information Evening

11 October 2017

Semester 1, 2018 applications close

31 January 2018*

Postgraduate Information Evening

Mid-May 2018

To find out about other important University dates, please visit sydney.edu.au/dates



* Some exceptions apply. Please search for your course online to check exact closing dates.
sydney.edu.au/courses

This guide provides key information you need to apply for a postgraduate degree in engineering, information technologies or project management, but the next step is up to you.

To learn more, come and see us on Open Day, attend one of our postgraduate information sessions, call our helpline or visit our website.

sydney.edu.au/postgraduate
sydney.edu.au/engineering

Join our online communities

 @Engineering.IT.Sydney.University
 @Eng_IT_Sydney

Contact us

sydney.edu.au/ask
1800 SYD UNI (1800 793 864)
+61 2 8627 1444 (outside Australia)