



THE UNIVERSITY OF
SYDNEY

Contact us

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

Postgraduate guide 2020

Engineering, Computer Science and
Project Management

We acknowledge the tradition of custodianship and law of the Country on which the University of Sydney campuses stand. We pay our respects to those who have cared and continue to care for Country.



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/engineering
1800 SYD UNI (1800 793 864)
+61 2 8627 1444

Postgraduate guide 2020

Engineering, Computer Science and
Project Management

Join us

Where will postgraduate study lead you?	2
A world of opportunity	3
Our new precinct	4
Postgraduate coursework options	6
Postgraduate courses – summary	7
Fast-track your postgraduate studies.....	8

Courses

Master of Complex Systems	10
Master of Engineering	12
Master of Professional Engineering	14
Master of Project Leadership	16
Master of Project Management	18
Master of Project and Program Management	20
Master of Data Science	22
Master of Health Technology Innovation.....	24
Master of Information Technology.....	26
Master of Information Technology Management.....	28
Master of Information Technology and Master of Information Technology Management.....	30
Graduate Diploma in Computing	32
Master of Transport	34

Research

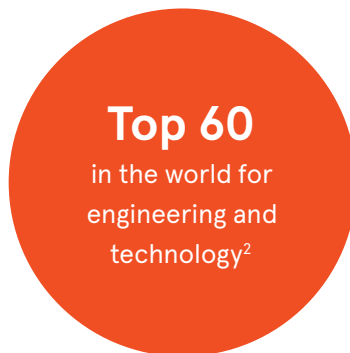
Master of Philosophy	36
Doctor of Philosophy	36

Join us

How to apply.....	38
Important dates.....	39

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 steer you to places you 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.

The University's people drive our greatest feats. We give you access to leading lecturers, research supervisors, industry networks, and cross-disciplinary centres of teaching and research excellence from Australia and around the world.

World standard education

Our graduates are among the world's most sought-after employees – we are ranked first in Australia and fifth in the world for graduate employability.¹

Our ranking in the top 60 universities worldwide for engineering and technology reflects our outstanding reputation.² The Australian Government ranked all of our research at world standard or above in its latest Excellence in Research for Australia ratings.³

Connected with industry

Our courses are designed with, and taught by, industry professionals in engineering and information technologies. We partner with leaders from business, industry and academia based here in Sydney and around the globe.

Our expertise and facilities are highly sought after, with staff and students 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.

Innovative spaces

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:

- Sydney Institute for Robotics and Intelligent Systems, 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.

¹ QS Graduate Employability Rankings 2020

² QS World University Rankings by Subject 2019

³ Excellence in Research Australia Rankings 2018

A world of opportunity

We are committed to international teaching, research and industry partnerships. We encourage our students to deepen their knowledge and broaden their global outlook.

Find your overseas adventure

Student exchange gives you a unique opportunity to see the world and graduate with a truly global perspective.

– sydney.edu.au/student-exchange

Globally recognised qualifications

Our accredited courses enable you to practise as an engineering, IT professional or project manager in Australia and around the world.

Accredited Program



1200+

industry partners
across the globe

170

exchange partners
worldwide

26,550

global network
of alumni



Our new precinct

We're making a multimillion-dollar investment in your future.

At the University of Sydney we are determined to foster a healthy learning environment that keeps students engaged, motivated and inspired. As part of this, the Faculty of Engineering is undergoing a major redevelopment project, transforming our precinct with contemporary architecture, thoughtfully designed to enhance the student experience.

By 2020, you can expect to find yourself working in vibrant study spaces, modern teaching facilities and advanced laboratories.

Highlights include:

- dynamic activity-based working zones
- activated public spaces incorporating food outlets and recreation areas
- future-focused learning environments
- flexibility to adapt to new ways of working
- new innovations in design construction.



Artist's impressions of our new precinct



Postgraduate coursework options

Graduate certificates and graduate diplomas

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

Once you've finished a graduate certificate (usually six months of full-time study or 12 months part time), you may then be able to progress to the associated graduate diploma (usually one year full time or two years part time) or ultimately to a master's degree. See the progression diagram below (but please note that progression requirements can vary).

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

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 because of family, work or other commitments, we offer the flexibility of part-time study for domestic students.

Short courses

If you're not sure about studying a full degree, or if you're 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 to 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.

Fast-track your postgraduate degree

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

For more details, see page 8 or visit:

– sydney.edu.au/study/credit

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 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

Postgraduate courses – summary

Course name	CRICOS code	Credit points	Duration (years)		Mode of delivery	Page
			Full time	Part time		
Complex Systems						
Graduate Diploma in Complex Systems	089811G	48	1	2	On-campus day/evening	10
Master of Complex Systems	089810G	96	2	4		10
Engineering						
Graduate Certificate in Engineering	063747B	24	0.5	1	On-campus day	12
Graduate Diploma in Engineering	061793A	36	1	2		12
Master of Engineering	077463K	72	1.5	2-3		12
Master of Professional Engineering	077470M	144	3	5-6		14
Master of Professional Engineering (Accelerated)	098247M	96	2	3-5		14
Project Management						
Graduate Certificate in Project Leadership	074717F	24	0.5	1	On-campus day/evening; online; intensive	16
Graduate Diploma in Project Leadership	074716G	36	1	2		16
Master of Project Leadership	074715G	48	1	2	On-campus evening; intensive	16
Graduate Certificate in Project Management	031912C	24	0.5	1	On-campus day/evening; online; intensive	18
Graduate Diploma in Project Management	031913B	48	1	2		18
Master of Project Management	082914A	72	1.5	3	On-campus day/evening; online; block mode; Summer and Winter School	18
Graduate Certificate in Project and Program Management	097699B	24	0.5	1		20
Master of Project and Program Management	097700C	48	1	2		20
Computer Science						
Graduate Certificate in Data Science	087980F	24	0.5	1	On-campus day/evening	22
Master of Data Science	087981E	48	1	2		22
Graduate Diploma in Health Technology Innovation	083977M	60	1.5	3		24
Master of Health Technology Innovation	083976A	96	2	≤6		24
Graduate Certificate in Information Technology	039122B	24	0.5	1	On-campus day	26
Graduate Diploma in Information Technology	039123A	48	1	2		26
Master of Information Technology	082912C	72	1.5			26
Graduate Certificate in Information Technology Management	055187G	24	0.5	1		28
Graduate Diploma in Information Technology Management	055185J	48	1	2		28
Master of Information Technology Management	082913B	72	1.5	3		28
Master of Information Technology and Master of Information Technology Management	083638G	96	2	4	On-campus evening	30
Graduate Diploma in Computing	096317G	48	1	2	On-campus day	32
Transport						
Graduate Certificate in Transport	099888C	24	0.5	1	On-campus day/evening; intensive	34
Graduate Diploma in Transport	099889B	48	1	2		34
Master of Transport	099890J	72	1.5	3		34
Research						
Master of Philosophy (Engineering)	061790D	N/A	1-2	3-4	Research	36
Doctor of Philosophy (Engineering)	000703B	N/A	3-4	6-8	Research	36

Note: Part-time study is available only to domestic students. All courses have a mid-year intake. For up-to-date course information, please see sydney.edu.au/courses

Fast-track your postgraduate studies

Related study or professional work experience may be credited to your degree as recognition of prior learning (RPL). This means you won't have to repeat similar units and could graduate sooner.

Recognition of prior learning (RPL)

You may be eligible for recognition of prior learning if we assess your previous studies or professional work experience as being directly equivalent to our units of study. In some cases you may be granted a block of credit if it is in the same subject area. Some courses have existing RPL arrangements for some qualifications.

The diagrams on the next page demonstrate how RPL can be credited towards a Master of Engineering and a Master of Professional Engineering. Please note that this is only a guide – all RPL granted is subject to faculty assessment and approval.

The admission criteria listed in this guide are based on the University of Sydney's grading system.

For qualifications gained outside Australia (or where grading systems differ), the University determines equivalencies and admission criteria based on the country, institution and qualification.

How do I apply for RPL?

You need to apply for RPL when completing your online course application. We will let you know in your offer letter if you have been successful.

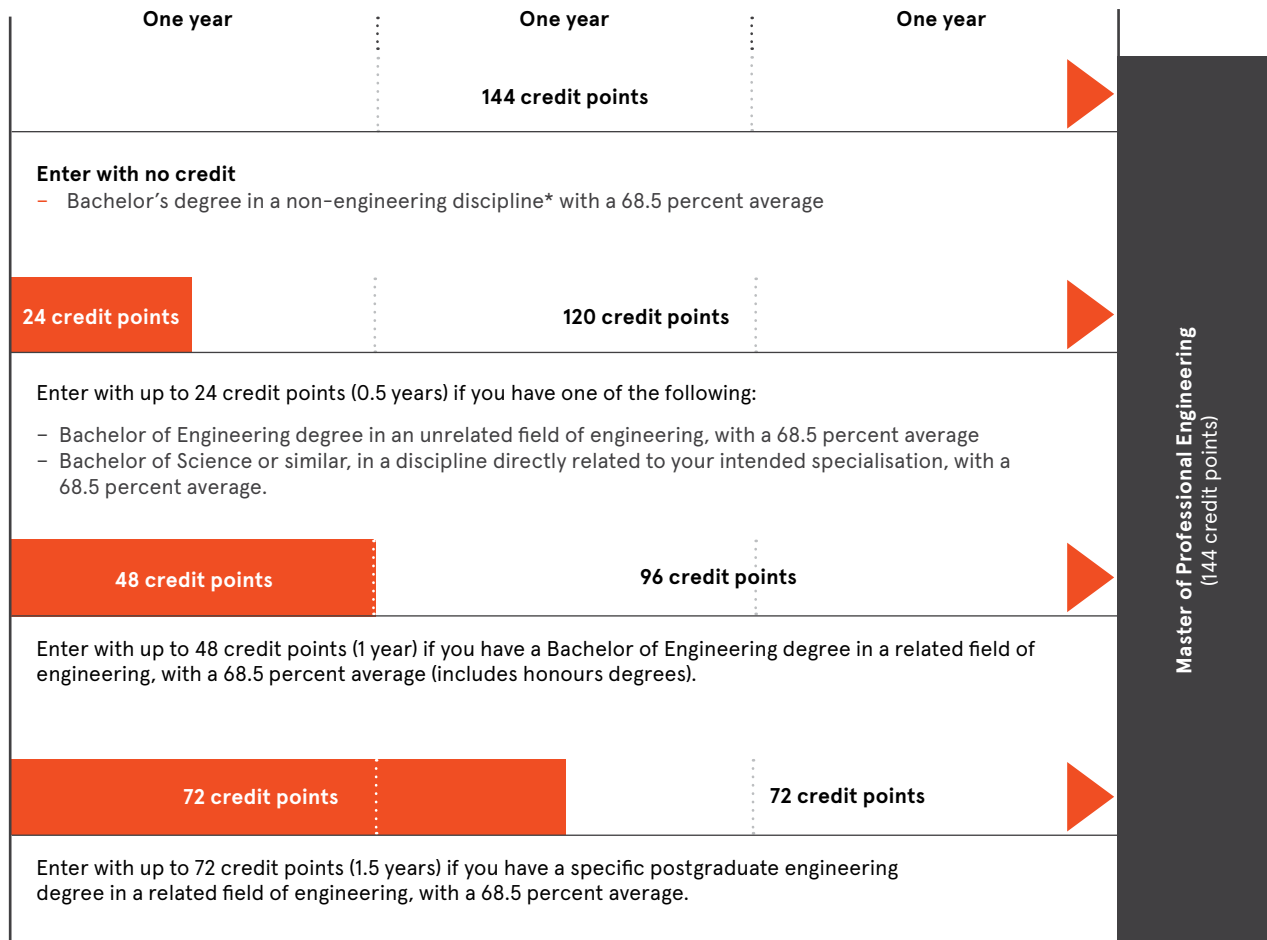
For more information about course-specific admission criteria, visit the relevant course website.

For more information, visit
– sydney.edu.au/study/credit



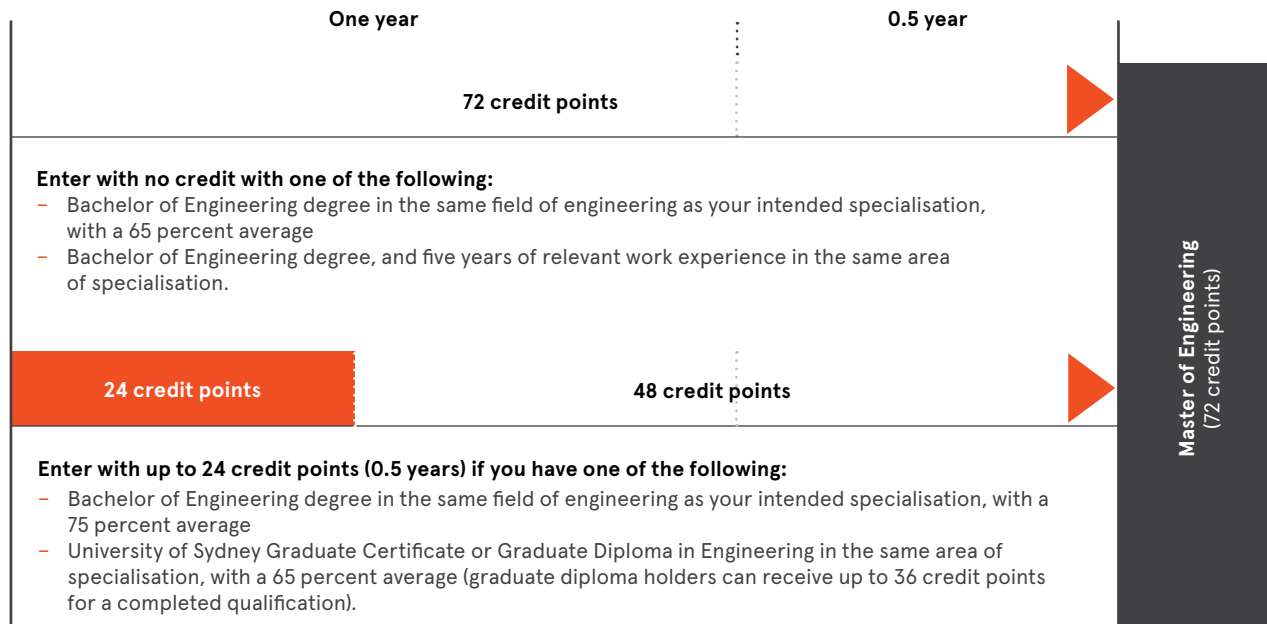
Examples of credited prior learning

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 Engineering (1.5 years/72 credit points)



Master of Complex Systems

Modern smart cities, infrastructure and ecosystems are susceptible to abrupt, large-scale and disruptive dynamics. There is growing demand for professionals who are capable of anticipating, controlling and managing 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 statewide electricity grid failures, or the emergence of a new pathogen in a remote village can give rise to a devastating global epidemic.

Our graduates gain the expertise to model, analyse and design resilient strategies for crisis forecasting and management in complex technological, socioeconomic and socioecological systems. You will develop 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.

As the only degree of its kind in the southern hemisphere*, complex systems is especially important for the Asia-Pacific region. With booming populations and growing megacities, countries and businesses must work across discipline boundaries to glean insight and solve complex global challenges.

*University of Sydney-commissioned research December 2017

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 Systems' research strengths, you have the flexibility to tailor your learning to your professional interests, with your choice of specialisations from:

- biosecurity
- 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 to your vocational objectives or interests.



“I chose this degree as I wanted to pursue university study in artificial intelligence. It has allowed me to work on interesting projects using the skills I’ve developed in computation modelling, data visualisation and systems dynamics.”

Mike Li
Graduate, Master of Complex Systems



Available courses

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

Course name	Credit points	Duration (full time)
Master of Complex Systems	96	2 years
Graduate Diploma in Complex Systems	48	1 year

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of this degree. See page 8 for details.

Admission criteria

To apply for the Master of Complex Systems, you need to have a recognised bachelor's degree with a minimum credit average (65 percent) in a quantitative discipline such as engineering, computer science, information technology, mathematics, statistics, physics, transport, business or finance, or any honours 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 a qualification 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
COMP9001	Core: Introduction to Programming	1	6
ENVI5801	Core: Social Science of Environment	1	6
CSYS5010	Core: Introduction to Complex Systems	1	6
CSYS5030	Core: Information Theory and Self-organisation	2	6
COMP5048	Core: Visual Analytics	2	6
QBUS5001	Elective: Quantitative Methods for Business	2	6
PMGT5886	Core: System Dynamics Modelling for PM	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
QBUS6810	Elective: Statistical Learning and Data Mining	1	6
ELEC9103	Elective: Simulations and Numerical Solutions in Engineering	2	6
CSYS5051	Capstone: Complex Systems Capstone Project B	2	6
CSYS5040	Core: Criticality in Dynamical Systems	2	6
COMP5318	Elective: Machine Learning and Data Mining	2	6

Sem = semester; cp = credit points

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

Master of Engineering

This is a specialised program for qualified engineers seeking to move into management or a senior technical role. It is designed to help qualified engineers to 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 specialised units that comprise a major in your chosen field. This program has a strong focus on project work to enhance self-directed learning.

Majors

The Master of Engineering allows you to build on your existing undergraduate engineering degree by developing specialised technical knowledge in one of 15 engineering majors:

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



Available courses

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

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

Professor Branka Vucetic
Director, Centre of Excellence in Telecommunications



Admission criteria

To apply for this master’s 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 (65 percent).

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 admission to the Graduate Diploma in Engineering. If you achieve a credit average in the first semester, you can apply to transfer to the Master of Engineering.

Learn more

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

– sydney.edu.au/courses



Indicative course progression

Example progression for Master of Engineering with a major in Power Engineering

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
ELEC5204	Specialist: Power Systems Analysis and Protection	1	6
PMGT5871	Core: Project Process Planning and Control	1	6
ENGG5103	Core: Safety Systems and Risk Analysis	2	6
ELEC5206	Specialist: Sustainable Energy Systems	2	6
ELEC5212	Specialist: Power System Planning and Markets	2	6
ELEC5020	Research: Capstone Project A	2	6
Year 2			
ELEC5021	Research: Capstone Project B	1	6
ELEC5211	Specialist: Power System Dynamics and Control	1	6
ELEC5208	Specialist: Intelligent Electricity Networks	1	6
ELEC5616	Elective: Computer and Network Security	1	6

Sem = semester; cp = credit points

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

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

It will give you the professional engineering practice and research skills that lead to recognition as an Australian graduate engineer. Your qualifications will also 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.

The Master of Professional Engineering (Accelerated) is also available and can be completed in two years.

Specialisations

The following available specialisations are fully accredited by Engineers Australia, the national engineering 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
- intelligent information engineering
- software engineering.



“I wanted to build a stronger foundation in chemical engineering and become a professional engineer. Choosing the Master of Professional Engineering is one of the best decisions I’ve made. I’m now working as a risk and safety engineer in Sydney.”

Michelle Liu
Graduate, Master of Professional Engineering

Available courses

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

Course name	Credit points	Duration (full time)
Master of Professional Engineering	144	3 years*
Master of Professional Engineering (Accelerated)	96	2 years

* For many students, the Master of Professional Engineering degree can be completed in two years.

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of this degree. See page 8 for details.

Admission criteria

To apply for this degree, 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 specialisation.

Professional accreditation

The Master of Professional Engineering and the Master of Professional Engineering (Accelerated) are accredited by Engineers Australia. They include a mandatory 12-week internship and capstone project.

Learn more

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

– sydney.edu.au/courses

Accredited by:



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			
CIVL9802	Core: Statics	Jan*	6
CIVL9110	Core: Materials	1	6
CIVL9201	Core: Structural Mechanics	1	6
CIVL9700	Core: Transport Systems	1	6
GEOL1501	Core: Engineering Geology 1	2	6
CIVL9410	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
CIVL5452	Elective: Foundation Engineering	1	6
CIVL6666	Elective: Open Channel Flow and Hydraulic Structures	1	6
CIVL5021	Core: Capstone Project B	2	6
CIVL6455	Elective: Engineering Behaviour of Soils	2	6
CIVL6264	Elective: Composite Steel-Concrete Structures	2	6
CIVL6268	Elective: Structural Dynamics	2	6

* Intensive January (Summer) session

Sem = semester; cp = credit points

Indicative progression based on a 144 credit point master's degree with January/February Intensive enrolment

Master of Project Leadership

Develop sophisticated, high-level management skills to lead complex projects on a large scale.



sydney.edu.au/engineering

Designed for senior managers with a minimum of five years' work experience, this professional degree will develop your decision-making skills to incorporate open-systems innovation, dynamic social networks and design thinking.

Equipped with an in-depth understanding of projects and their portfolios, you will learn to apply strategic complex systems thinking approaches for successful organisational leadership and governance.

An innovative and challenging program, this master's degree takes 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

This program comprises core project leadership units of study, along with your chosen electives.

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 these.

Available courses

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

Admission criteria

To apply for this degree, you need to have a recognised bachelor's degree in any discipline, with at least 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 also 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
PMGT6871	Elective: Project Planning and Governance	1	6
PMGT5897	Core: Disaster Project Management	July*	6
PMGT5861	Core: Project Leadership Thesis B	2	6
PMGT5896	Core: Sustainability and Intelligence in PM	2	6
PMGT6891	Core: Risk Dynamics and Resilience	2	6

* Intensive July (Winter) session

Sem = semester; cp = credit points

Indicative progression based on a 48 credit point master's degree with 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

Graduate, Master of Project Leadership
General Manager, Strategic Bidding, Downer



Master of Project Management

This professional qualification will provide you with a sound educational platform to confidently launch and develop your project management career.

This master's degree will 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, the arts, manufacturing, IT, finance, law and consultancy.

The initial stage of the program will develop your critical thinking and analysis skills, which you will then apply in the context of projects.

You will also develop core project management skills in process and planning, people and stakeholder management, project finance and risk, and effective project delivery. Towards the end of the program you will have the opportunity to specialise in a particular area of project management.

Course structure

This program comprises core project management units of study, industry-linked learning, and your chosen electives.

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 these.

Specialisations

Available specialisations include:

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

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

Available courses

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

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.



“I was attracted to study project management because of the rapid growth of projects in the banking and financial services sector. I’ve developed skills in high demand, opening doors to different areas of business development that would not have been available to me otherwise.”

Swati Vedi

Graduate, Master of Project Management



Admission criteria

To apply for the master’s 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 hold a bachelor’s degree without a credit average, you may be considered for admission to the Graduate Diploma in Project Management. After achieving a credit average in four units of study, you may apply to transfer to the Master of Project Management.

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

Professional accreditation

The Master of Project Management is accredited by the Project Management Institute’s Global Accreditation Centre (GAC) for Project Management Education Programs.

Learn more

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

– sydney.edu.au/courses

Accredited by:



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

Sem = semester; cp = credit points

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



Master of Project and Program Management

Take your project management career further with advanced skills in strategic planning, stakeholder management and leadership.

Designed for project managers with a minimum of two years' work experience, this professional degree will take you beyond conventional concepts of project management and help you to excel in your program management career.

You'll develop your strategic thinking capabilities and gain the organisational skills to manage larger projects and program portfolios. You'll also focus on interpersonal skills for effective leadership, and learn how to apply the principles of emotional intelligence to influence and achieve successful project and program outcomes.

This master's degree allows you to draw on your workplace experience as you learn. You'll work closely with a range of industry partners who will share their knowledge, experience and opportunities throughout all aspects of the course – from workshops to assessments – and learn from others who are facing and solving complex project and program challenges.

You can also choose to undertake an international study tour, working with students from other leading international universities.

Course structure

The program comprises critical project and program management units of study. After completing these units, you will bring your workplace projects to your studies. You'll extend your thinking and improve both your work and your study outcomes by focusing on real-world learning experiences.

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

We also offer an embedded research pathway for people interested in pursuing a research degree or who wish to dive into a deeper analysis of a project or program related topic.

Available courses

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

Course name	Credit points	Duration (full time)
Master of Project and Program Management	48	1 year
Graduate Certificate in Project and Program Management	24	0.5 years

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

Learn more

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

– sydney.edu.au/courses

Admission criteria

To apply for this master's degree, you need to have two years of relevant work experience and 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 or Graduate Certificate in Project and Program Management from the University of Sydney, with a credit average.

If you hold a bachelor's degree with a credit average but no work experience, you may be considered for admission into the Master of Project Management. If you do not hold a bachelor's degree but have considerable work experience, you may be considered for a graduate certificate in one of our project management degrees.

Indicative course progression table

Example progression for Master of Project and Program Management

Unit code	Unit of study	Sem	cp
Year 1			
PMGT6812	Integrated Project Delivery Approaches	1	6
PMGT6871	Project Planning and Governance	1	6
PMGT6872	Project Leadership and Communications	1	6
PMGT6888	International Project Study Tour	1	6
PMGT5879	Strategic Portfolio and Program Management	2	6
PMGT5896	Sustainability and Intelligence in PM	2	6
PMGT6873	Project Economics and Investment	2	6
PMGT6850	Project and Program Management Capstone	2	6

Sem = semester; cp = credit points

Indicative progression based on a 48 credit point master's degree with 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 any 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 effectively to key stakeholders.

Course structure

The Master of Data Science program 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 just the following four core units:

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

For the master's program you can select your 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.

“In my experience, employers have become far more interested in candidates who possess industry-specific expertise, complemented by data science capabilities. The Master of Data Science bridges that gap in the labour market.”

Nicholas James
Graduate, Master of Data Science
Candidate, PhD in machine learning
Hedge fund analyst





Available courses

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

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

Admission criteria

To apply for this master's 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 of Sydney).

If you have studied honours in other areas, such as health or education, you may be eligible for the Graduate Certificate in Data Science to provide you with the data science capability to complement your existing skills and open 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

“Data is at the centre of the digital age. It provides valuable insights into areas such as customer behaviour, market intelligence and operation performance. Our research leverages the University of Sydney’s many strengths to explore all facets of data analytics and machine learning, and best practices on how to use it.”

Associate Professor Fabio Ramos
Co-director, Centre for Translational Data Science

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

Sem = semester; cp = credit points

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

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

The program is taught by leaders in health, engineering and technology from across the University and its extensive network of hospitals and healthcare facilities.

Course structure

The program 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 these.

Available courses

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

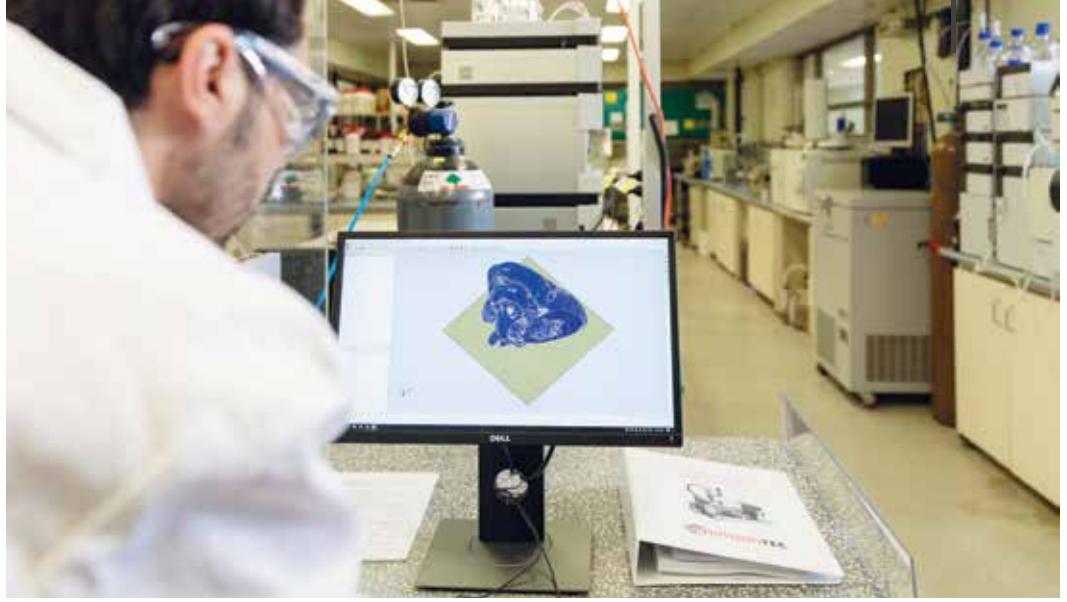
Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.



“Solving complex health problems through technology is a key focus of this course. It provides the opportunity to work with students from different professional backgrounds and allows you to expand your understanding in new areas and build on your current knowledge. Health technology is an exciting and growing industry where you can make a difference.”

Stephanie Yano

Graduate, Master of Health Technology Innovation



Admission criteria

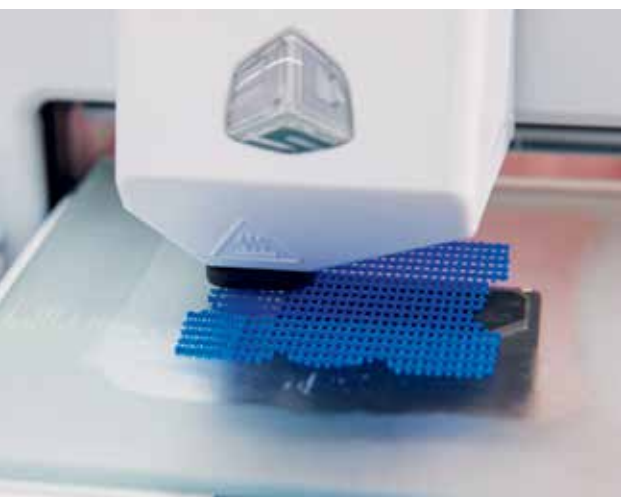
To apply for this master's degree, you need to have a recognised bachelor's degree with at least a credit average (65 percent) from the University of Sydney, or equivalent qualifications.

If you do not meet the admission criteria for the master's degree, you might wish to consider the graduate diploma 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	Specialist: 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
PUBH5224	Specialist: Advanced Epidemiology	2	6
HTIN6012	Project: Health Technology Innovation Capstone B	2	6

Sem = semester; cp = credit points

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

Master of Information Technology

Gain a degree that's specifically designed for IT professionals who are looking to update and extend their technical knowledge of advanced computing subjects or move into a new IT specialisation.



sydney.edu.au/engineering

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

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

Course structure

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

Specialisations

Available specialisations include:

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

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

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

The University of Sydney

Accredited Program



Page 26

Available courses

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

Admission criteria

To apply for this master's 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 admission to the graduate diploma or graduate certificate.



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 in Cybersecurity

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

Sem = semester; cp = credit points

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

“The knowledge and skills I've acquired 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

Graduate, Master of Information Technology
Lead Software Engineer, RateSetter

Master of Information Technology Management

Make the transition into IT 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 to 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.

Accredited Program



Course structure

This program 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 evenings to accommodate your professional commitments.

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



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

Giovanna Rojas Sanchez

Graduate, Master of Information Technology Management



Available courses

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

Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your degree. See page 8 for details.

Admission criteria

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

Alternatively, you need 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 admission to the Graduate Diploma in Computing.

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
INFO5991	Services Science Management and Engineering	2	6
COMP5216	Elective: Mobile Computing	2	6
Year 2			
INFO5992	Core: Understanding IT Innovations	1	6
INFO6012	Specialist: Information Technology Strategy and Value	1	6
COMP5703	Project: Information Technology Capstone Project	1	12

Sem = semester; cp = credit points

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

Master of Information Technology and 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 program's accelerated two-year structure gives you an 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 program comprises four core units as well as technical and managerial specialist units, electives and a compulsory capstone project.

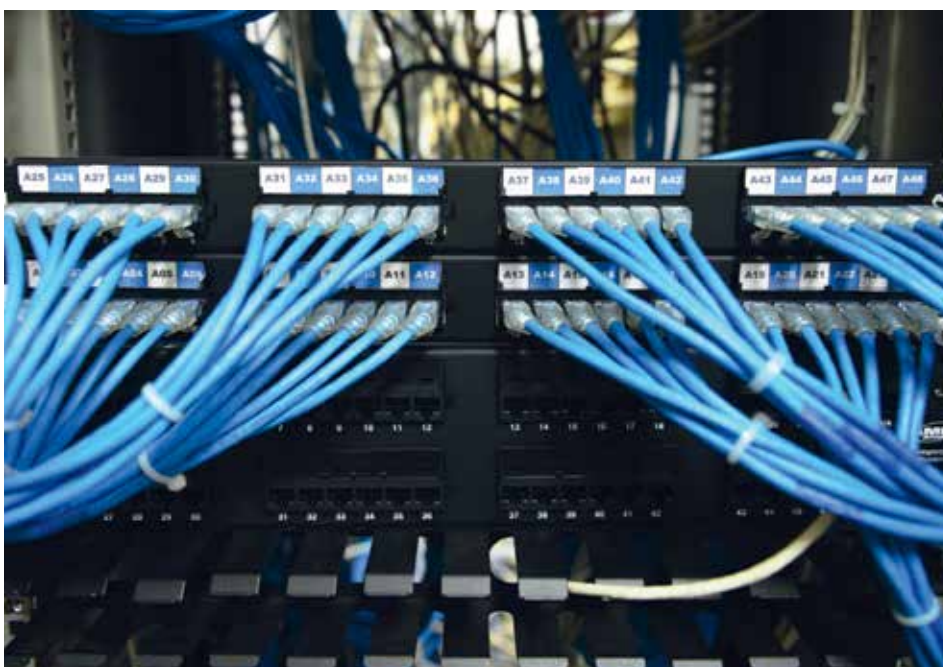
Classes are generally held in the evenings to accommodate your professional commitments.

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
- cybersecurity
- networks and distributed systems
- software engineering.

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



Accredited Program





“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

Graduate, Master of Information Technology and Master of Information Technology Management
Data Analytics Manager, KPMG

Available courses

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

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

This accelerated program combines elements from the two master’s programs into a single 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), which could reduce the length of your degree. See page 8 for details.

Admission criteria

To apply for this degree, you need to have 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 (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 and Master of Information Technology Management (combined), with a specialisation in Data Management and Analytics

Unit code	Unit of study	Sem	cp
Year 1			
COMP5206	Core: Information Technologies and Systems	1	6
COMP5349	MIT Specialist: Cloud Computing	1	6
COMP5318	MIT Specialist: Machine Learning and Data Mining	1	6
COMP5046	MIT Specialist: Natural Language Processing	1	6
COMP5048	MIT Specialist: Visual Analytics	2	6
INFO5990	Core: Professional Practice in IT	2	6
NFO6012	MITM Specialist: Information Technology Strategy and Value	2	6
COMP5338	MIT Specialist: Advanced Data Models	2	6
Year 2			
INFO5991	MITM Specialist: Services Science Management and Engineering	1	6
COMP5329	MIT Specialist: Deep Learning	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

Sem = semester; cp = credit points

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

Graduate Diploma in Computing

Enhance your career with a strong foundation in IT – integral to a wide range of industries. This qualification is ideal for non-IT graduates looking to upskill or pursue a master’s in this field.



“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 startup company.”

Nicky Ringland

Graduate, Diploma in Computing, PhD
Co-founder, Grok Learning

This program will provide you with a strong foundation in IT. You can also choose to explore a range of specialist areas, which 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 IT systems and develop IT skills that are integral to a wide range of disciplines including health, science, engineering and business.

Course structure

In up to four foundation units, this program covers core IT knowledge including programming, data management, system analysis and modelling, and networking. You can then choose additional IT or IT management specialist units to complete your diploma.

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

Available courses

This program can only be taken at the level of a graduate diploma.

Course name	Credit points	Duration (full time)
Graduate Diploma in Computing	48	1 year



Depending on the level and type of your prior studies, you may be eligible for recognition of prior learning (RPL), which could reduce the length of your diploma. See page 8 for details.

If you are interested in pursuing further study after completing your diploma, you be eligible for RPL for one of our master's degrees, such as the Master of Information Technology.

Admission criteria

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, you may be eligible for admission 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. 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
COMP9103	Foundation: Software Development in Java	1	6
COMP9120	Foundation: Database Management Systems	1	6
COMP9601	Foundation: Computer and Network Organisation	1	6
COMP5415	Specialist: Multimedia Design and Authoring	2	6
COMP5048	Specialist: Visual Analytics	2	6
COMP5338	Specialist: Advanced Data Models	2	6
COMP5427	Specialist: Usability Engineering	2	6

Sem = semester; cp = credit points

Indicative progression based on a 48 credit point graduate diploma with Semester 1 enrolment

Master of Transport

Gain the technical skills to analyse, design and implement transport systems for a career in transport engineering, planning or policy management.

The Master of Transport is Australia's first interdisciplinary degree focusing on the engineering, urban planning, and business management of transport.

This professional full-time degree is ideal for graduates wanting to pursue a career in the ever-growing global transport sector, or for professionals already in the field wanting to upskill.

It is designed to develop your critical understanding of the prevalence and identification of transport systems, your core capabilities for analysing and designing such systems, and your proficiencies in broad interdisciplinary analysis.

The Master of Transport will also further your abilities in strategic and logical reasoning, deduction, and network and temporal data analysis. You will also have the benefit of undertaking a practice-based capstone project.

This degree leverages the strengths of the University of Sydney's Institute of Transport and Logistics Studies – which has exceptionally strong links with industry and is recognised by the Australian Government as a centre of excellence in research and education – and the ongoing transport engineering research being undertaken by the Faculty of Engineering.

Course structure

This program comprises core units of study along with electives.

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 these.

Available courses

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

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





Admission criteria

To apply for this master's degree, you need to have a recognised bachelor's degree or higher qualification in engineering, business, management, commerce, economics, project management, physics, geography, architecture or planning, with a credit average (65 percent).

If you do not meet the admission criteria for the master's degree, you might wish to consider the graduate diploma or the graduate certificate 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 Transport

Unit code	Unit of study	Sem	cp
Year 1			
ARCH9100	Introduction to Urban Design	1	6
CIVL5703	Transport Policy, Planning and Deployment	1	6
ITLS5100	Transport and Infrastructure Foundations	1	6
ITLS5200	Quantitative Logistics and Transport	1	6
CIVL5704	Transport Analytics	2	6
ITLS6102	Strategic Transport Planning	2	6
ITLS6107	Applied GIS and Spatial Data Analytics	2	6
PLAN9064	Land Use and Infrastructure Planning	2	6
Year 2			
CIVL5702	Traffic Engineering	1	6
ITLS6103	Sustainable Transport Policy	1	6
PLAN9075	Urban Data and Science of Cities	1	6
PLANXXXX	New capstone unit	1	6

Sem = semester; cp = credit points

Indicative progression based on a 72 credit point master's degree with 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 of the Association of Pacific Rim Universities. The latter partners us with other universities that excel in research, including Stanford, UCLA, Shanghai Jiao Tong University, the University of Hong Kong, Nanyang Technological University and Tsinghua University.

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

Our research degrees

Master of Philosophy (MPhil)

2 years (full time)

Undertake research and an advanced specialisation in any area of scholarship or design covered by the Faculty of Engineering.

Admission requires a bachelor's degree with honours in a relevant discipline.

Doctor of Philosophy (PhD)

3 years (full time)

Receive the highest qualification available in Australia and submit a thesis that is an original contribution to your chosen discipline.

Admission requires a master's degree with a research component or a bachelor's degree with first- or second-class honours. You may be able to upgrade from the Master of Philosophy program if you have made satisfactory progress.



Research centres

You'll have access to our research centres and institutes, including:

- ARC Training Centre for Innovative Bioengineering
- Centre for Advanced Materials Technology
- Centre for Advanced Structural Engineering
- Centre for Distributed and High-performance Computing
- Centre for Excellence in Advanced Food Engineering (CAFE)
- Centre for Future Energy Networks
- Centre for Internet of Things and Telecommunications
- Centre for Robotics and Intelligent Systems
- Centre for Sustainable Energy Development
- Centre for Wind, Waves and Water
- Institute of Biomedical Engineering and Technology (BMET)
- Sydney Centre in Geomechanics and Mining Materials (SciGEM)
- Sydney Institute of Robotics and Intelligent Systems
- UBTECH Sydney Artificial Intelligence Centre.

Find out more about our research centres at:

- sydney.edu.au/engineering/our-research



Areas of expertise

We have dedicated researchers and supervisors from around the world who provide expertise in a range of disciplines.

The faculty has committed to investing major resources in the following key areas to develop new facilities, collaborations and partnership opportunities to tackle society's most challenging problems.

Biomedical engineering and technologies

- Biomechanics, biomaterials and tissue engineering
- Biomolecular and cellular engineering
- Biomedical devices and instrumentation
- Biomedical imaging, visualisation and information technologies

Data science and computer engineering

- Computer-human adapted interaction
- Computer, software and electronic engineering
- Human-centred technology
- Image processing
- Artificial intelligence

Food products, process and supply chain

- Food engineering across the supply chain
- Advanced food processing technologies
- Engineering food properties and structure
- Sustainable food systems and food packaging
- Resources recovery from the food supply chain
- Food safety and security
- Food process engineering and modelling
- Food engineering for nutrition and health

Internet of things and telecommunications

- Fibre-optics and photonics engineering
- Wireless networking
- Wireless network control
- Information theory
- Coding theory
- Fifth-generation wireless systems
- Ultra-high reliability low-latency communication systems

Robotics and intelligent systems

- Agricultural robotics
- Control and optimisation of dynamic systems
- Intelligent transport systems
- Marine systems
- Security and defence systems

We also have a wealth of resources dedicated to infrastructure, transport, complex systems, energy and the environment. Find out more at:

- sydney.edu.au/engineering/our-research

Supporting our researchers

We are dedicated to providing you with the support you need to achieve your research goals.

Research training and workshops

There are a number of workshops and training opportunities available to help you develop your skills in research, writing, communication and project management.

Postgraduate Research Support Scheme

This scheme provides University funding to attend conferences around the world. It can also support your fieldwork or research overseas.

Scholarships

We offer a range of scholarships and other forms of financial assistance to help you achieve your professional and personal goals. Find out more at:

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

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 course search website:

- sydney.edu.au/courses

Our course search website also includes information on course availability for international student visa holders.

Step 2

Check the admission criteria

Select the course you wish to apply for, and check that you meet the admission criteria, including academic, English language, and course-specific requirements.

- sydney.edu.au/courses

Step 3

Submit your application

Click the 'Apply' button on the course page to proceed with your online application.

You can also apply for recognition of prior learning which, if approved, could 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 admission criteria

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 to 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 supervisor, you will need to develop and submit an initial research proposal. The supervisor will read and comment on your proposal, and will advise whether 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

Lodge your application online:

- search for your program of study at sydney.edu.au/courses
- select the program 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 (from outside Australia)

Important dates

Open Day

31 August 2019

Postgraduate Masterclasses

14–18 October 2019

Postgraduate Expo and Webinars

14–18 October 2019

Postgraduate Open Evening, Central Business District Campus

4 December 2019

Semester 1, 2020 applications close

31 January 2020

Postgraduate Information Evening, Camperdown Campus

May 2020

Semester 2, 2020 applications close

June 2020

To find out about other important dates, visit:

- sydney.edu.au/application-dates
- sydney.edu.au/event-dates
- sydney.edu.au/study-dates




Please note that exceptions apply to application dates. 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, computer science 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
-  @engineering.sydney
-  www.linkedin.com/showcase/university-of-sydney-engineering-and-computer-science

Contact us

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