



THE UNIVERSITY OF
SYDNEY

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Postgraduate guide 2019

**Engineering, Information Technologies
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.



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Postgraduate guide 2019

Engineering, Information Technologies and Project Management

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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.

1st

in Australia and ranked
4th in the world for
graduate employability¹

Top 40

in the world for
Engineering and
Technology²

**World
standard**

or above in Excellence
in Research for
Australia ratings³

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 fourth in the world for graduate employability.¹

Our ranking in the top 40 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:

- 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.

¹ QS Graduate Employability Rankings, 2018

² QS World University Rankings by Subject, 2018

³ Excellence in Research Australia (ERA) Rankings, 2015

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 multi-million dollar investment towards 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 and Information Technologies 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 space incorporating food outlets and recreation areas
- future-focused learning environments
- flexibility to adapt to new ways of working
- new innovations in design construction.



Artist 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 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 admission criteria 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 – please note that progression requirements can vary).

A graduate certificate or diploma is also an excellent option if you don't want to commit to a full master's, but still would 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 (eg, because of family or work commitments), we offer the flexibility of part-time study for domestic students.

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.

Fast track 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'.

For more details, refer to 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 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	✓	✓			10
Graduate Diploma in Complex Systems	1	48	✓	✓			10
Engineering							
Master of Engineering	1.5	72	✓	✓			12
Graduate Diploma in Engineering	1	36	✓	✓			12
Graduate Certificate in Engineering	0.5	24	✓	✓			12
Master of Professional Engineering	2–3	144	✓	✓			14
Project Management							
Master of Project Leadership	1	48	✓	✓	✓	✓	16
Graduate Diploma in Project Leadership	1	36	✓	✓	✓	✓	16
Graduate Certificate in Project Leadership	0.5	24	✓	✓	✓	✓	16
Master of Project Management	1.5	72	✓	✓	✓	✓	18
Graduate Diploma in Project Management	1	48	✓	✓	✓	✓	18
Graduate Certificate in Project Management	0.5	24	✓	✓	✓	✓	18
Master of Project and Program Management	1	48	✓	✓	✓	✓	20
Graduate Certificate of Project and Program Management	0.5	24	✓	✓	✓	✓	20
Information Technologies							
Master of Data Science	1	48	✓	✓			22
Graduate Certificate in Data Science	0.5	24	✓	✓			22
Master of Health Technology Innovation	2	96	✓	✓	✓	✓	24
Graduate Diploma in Health Technology Innovation	1.5	60	✓	✓	✓	✓	24
Master of Information Technology	1.5	72	✓	✓			26
Graduate Diploma in Information Technology	1	48	✓	✓			26
Graduate Certificate in Information Technology	0.5	24	✓	✓			26
Master of Information Technology Management	1.5	72	✓	✓			28
Graduate Diploma in Information Technology Management	1	48	✓	✓			28
Graduate Certificate in Information Technology Management	0.5	24	✓	✓			28
Master of Information Technology/ Master of Information Technology Management	2	96	✓	✓			30
Graduate Diploma in Computing	1	48	✓	✓			32
Research							
Master of Philosophy (MPhil)	2+	N/A	✓	✓			34
Doctor of Philosophy (PhD)	3+	N/A	✓	✓			34

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

Fast track your postgraduate studies

Related study or work experience can 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.

Credit for previous studies

You may be eligible for credit if we assess your previous studies 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 credit arrangements for some qualifications.

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

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

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

How do I apply for credit or RPL?

You need to apply 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 your relevant faculty website.

For more information, visit

– sydney.edu.au/study/credit



Examples of credited prior learning

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

One year	One year	One year	
	144 credit points		▶
Enter with no credit <ul style="list-style-type: none"> – Bachelor's degree in a non-engineering discipline* with a 68.5 percent average 			
24 credit points	120 credit points		▶
Enter with up to 24 credit points (0.5 years) if you have one of the following: <ul style="list-style-type: none"> – Bachelor of Engineering degree in an unrelated field of engineering with a 68.5 percent average – Bachelor of Science or similar (in a discipline directly related to your intended specialisation) with a 68.5 percent average. 			
48 credit points	96 credit points		▶
Enter with up to 48 credit points (1 year) if you have a Bachelor of Engineering degree in a related field of engineering with a 68.5 percent average (includes honours degrees).			
72 credit points	72 credit points		▶
Enter with up to 72 credit points (1.5 years) if you have a specific postgraduate engineering degree in a related field of engineering with a 68.5 percent average.			

Master of Professional Engineering
(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)

One year	0.5 year	
72 credit points		▶
Enter with no credit with one of the following: <ul style="list-style-type: none"> – Bachelor of Engineering degree in the same field of engineering as your intended specialisation, with a credit average (65 percent) – Bachelor of Engineering degree and five years of relevant work experience in the same area of specialisation. 		
24 credit points	48 credit points	▶
Enter with up to 24 credit points (0.5 years) if you have one of the following: <ul style="list-style-type: none"> – Bachelor of Engineering degree in the same field of engineering as your intended specialisation with a distinction average (75 percent) – University of Sydney Graduate Certificate or Graduate Diploma in Engineering in the same area of specialisation with a credit average (65 percent). Graduate diploma students can receive up to 36 credit points for a completed qualification. 		

Master of Engineering
(72 credit points)

Master of Complex Systems

Modern smart cities, infrastructure and ecosystems are susceptible to abrupt, large-scale and disruptive dynamics. There is a 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 state-wide 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 the areas of technological, socioeconomic and socioecological systems. You 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.

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 mega-cities, 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 System's research strengths, you have the flexibility to tailor your learning to your professional interests with the choice of 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.



“This unique degree has allowed me to work on interesting projects using developed skills in computation modelling, data visualisation and systems dynamics. I’m looking forward to using this knowledge in pursuing a career in artificial intelligence.”

Mike Li

Final-year student, Master of Complex Systems



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	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) that can 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 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

Sem - semester, CP - credit points

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

* Expected to change in 2019 to CSYS5040: Criticality in Dynamical Systems pending Academic Board approval.

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 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.



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

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 page 8.

“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



Admission criteria

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 admission 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



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 a 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 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 give you 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.

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.



“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 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*

*For many students the Master of Professional Engineering degree is completed in two years. 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 page 8.

Admission criteria

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 is accredited by Engineers Australia. Students must complete 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			
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

Sem - semester, CP - credit points

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

Master of Project Leadership

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



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

The course 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 options.

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

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 8 for details.

Admission criteria

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

Sem - semester, CP - credit points

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 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 this course will develop critical thinking and analysis skills that 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 also have the opportunity to specialise in area of project management.

Course structure

The course 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 utilise a combination of these options.

Specialisations

These include:

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

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

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

Prospective 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 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 a 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 excel in your program management career.

Develop your strategic thinking capability and gain the organisation skills to manage larger projects and program portfolios. You will 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 will allow you to draw on your workplace experience as you learn. You will work closely with a range of industry partners who share their knowledge, experience and opportunities in 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 undertake an international study tour, working with students from other leading international universities.

Course structure

The course comprises critical project and program management units of study. Following these units, students will bring their workplace projects to their studies. You will extend your thinking and improve both work and 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 may use a combination of these options.

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

Embedded courses

This program can be taken at the level of a master's degree or 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) that can 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 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			
PMGT6871	Project Planning and Governance	1	6
PMGT6872	Leadership and Communication	1	6
PMGT6873	Project Economics and Investment	1	6
PMGT5879	Strategic Portfolio and Program Management	1	6
PMGT6812	Integrated Project Delivery Approaches	2	6
PMGT6850	Project and Program Management Capstone	2	6
PMGT5896	Sustainability and Intelligence	2	6
PMGT6888	International Project Study Tour	2	6

Sem - semester, CP - credit points

Indicative progression based on a 72 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
- COMP9120 Database Management Systems
- STAT5002 Introduction to Statistics
- 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
- INFO5060 Data Analytics and Business Intelligence
- COMP5328 Advanced Machine Learning
- COMP5329 Deep Learning
- COMP5349 Cloud Computing
- COMP5046 Natural Language Processing
- COMP5425 Multimedia Retrieval
- 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

Hedge fund analyst and PhD candidate in machine learning



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

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 8 for details.

Admission criteria

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

“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 a 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, 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 8 for details.

Available courses

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

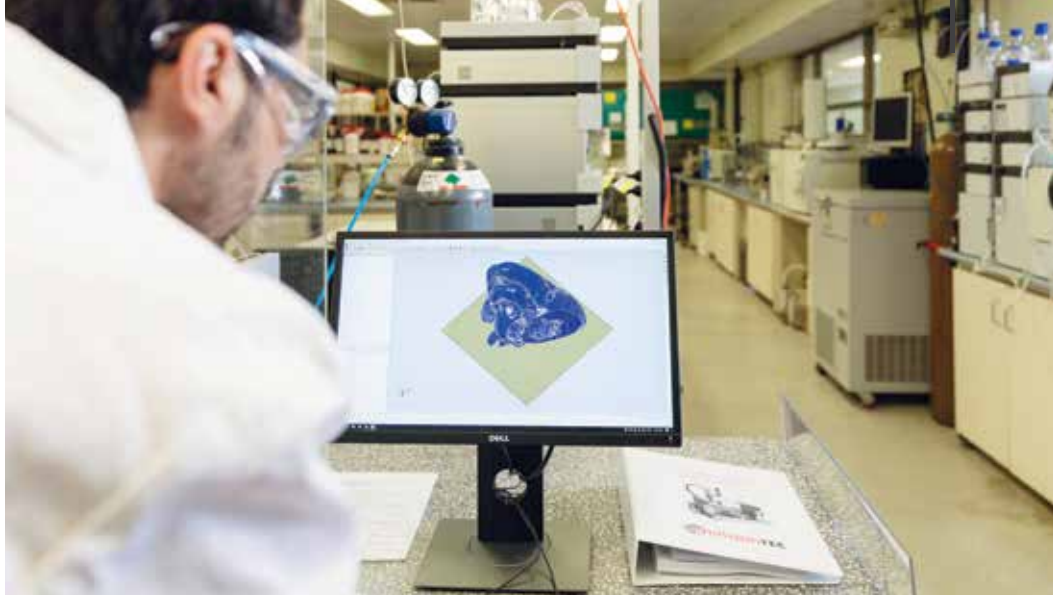
Course name	Credit points	Duration (full time)
Master of Health Technology Innovation	96	2 years
Graduate Diploma in Health Technology Innovation	60	1.5 years



“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

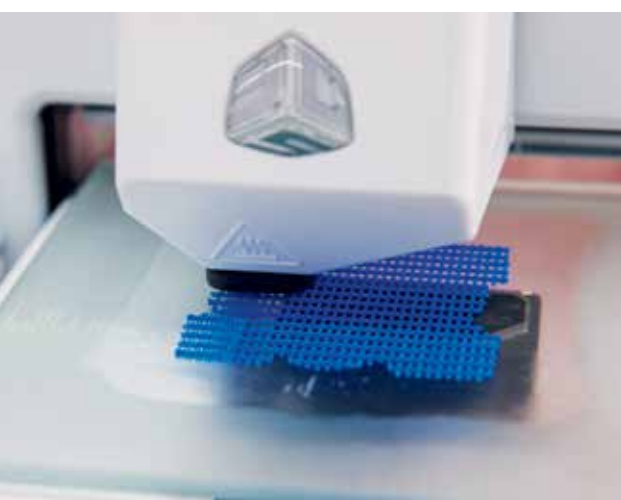
To apply for this degree, you need to have a recognised bachelor's degree with at least a credit average from the University of Sydney or equivalent qualifications.

Alternatively, for those who do not meet the admission criteria 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

Sem - semester, CP - credit points

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

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.

Accredited Program



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

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 8 for details.

Admission criteria

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 admission to the Graduate Diploma in Computing.

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 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

Sem - semester, CP - credit points

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

Lead Software Engineer, RateSetter
Master of Information Technology graduate

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.

Accredited Program



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.



“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, 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

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 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, 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 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
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

Sem - semester, CP - credit points

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.



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

Data Analytics Manager, KPMG

Master of Information Technology/Master of Information Technology Management graduate



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

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 8 for details.

Admission criteria

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 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 a 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 start-up company.”

Nicky Ringland
Co-founder, Grok Learning

This program will provide you with a strong foundation in IT. You can explore a range of specialist 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 up to four foundation units, this program covers core knowledge of information technology, including programming, data management, system analysis and modelling, and networking. You can choose additional IT or IT management specialist units to complete the diploma.

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

Available courses

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

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) that can 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
COMP5206	Specialist: Information Technologies and Systems	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 60 credit point diploma with a Semester 1 enrolment.

Research

At the University 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, 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 – the latest innovative technology across the physical, medical, life and engineering sciences, 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. 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 the discipline.

Admission criteria include 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:

- Australian Centre for Field Robotics
- 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 Enginomics (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)
- UBTECH Sydney Artificial Intelligence Centre

Find out more about our research centres:

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



Areas of expertise

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

The faculty has committed to invest major resources in the following key areas to develop new facilities, collaboration 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 on our website.

- 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 various scholarships and other forms of financial assistance to help you achieve your personal and professional goals. View our scholarship opportunities 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 find a course website:

- sydney.edu.au/courses

You can also find information on course availability for international student visa holders on our course website:

- sydney.edu.au/courses

Step 2

Check admission criteria

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

- sydney.edu.au/study/admission-criteria

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, 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 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 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)

Important dates

Semester 2, 2018 applications close

30 June 2018

Open Day

25 August 2018

Postgraduate Information Evening, Camperdown Campus

12 September 2018

Postgraduate Taster Master Classes, Camperdown Campus

11 October 2018

Postgraduate Open Evening, Central Business District Campus

8 November 2018

Semester 1, 2019 applications close

31 January 2019

Postgraduate Information Evening, Camperdown Campus

May 2019

Semester 2, 2019 applications close

30 June 2019

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

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