

Discover Engineering and IT in 2027



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Why choose Melbourne?

A community where every student can thrive

No matter where you've come from or where you aspire to be, at Melbourne you'll join a diverse and supportive community committed to your success. It's an environment shaped by curiosity and intellectual rigour, where ideas are tested, perspectives challenged and learning is focused on your future.

A distinctive curriculum for a changing world

From undergraduate study through to advanced graduate degrees, our unique curriculum helps you to develop critical thinking, creativity and adaptability.

Learning from world-renowned academics, researchers and industry leaders, you'll discover what you're good at, what excites you and where your interests might lead. Combined with learning experiences that extend beyond the classroom, you'll gain the expertise and confidence you need to navigate and succeed in your career over time.

A degree that evolves with you

Starting with a three-year bachelors degree, you'll choose subjects from over 100 study areas to shape the direction of your studies. This structure gives you the flexibility to respond to new interests and opportunities as they arise, while building towards long-term career outcomes.

You'll graduate with the motivation and capabilities to take on whatever comes next. From there, you can enter the workforce or continue into graduate study or research, to develop advanced expertise and gain a specialised professional qualification that is globally recognised.



① Average of latest ARWU, QS and Times Higher Education (THE) global university rankings

② THE global university rankings 2026

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

Why choose Engineering or Information Technology?

Do you love innovation and discovering how things work? Are you passionate about inventing, designing and creating solutions for society? A global career in Engineering and Information Technology might be for you.

Engineering and Information Technology skills are applicable across almost every sector, from health care right through to manufacturing. There are many career pathways you could take, and the following themes are just a few examples. You may study areas not listed here or find other unique ways to apply your talents within your chosen industry.

Flexible and focused course structures

Select majors, electives, and breadth subjects that align with your chosen career from day one or explore a range of diverse subjects to discover new passions.

Immersive and hands-on learning experiences

Work alongside world-renowned academics, researchers and industry experts while using the latest technologies, tools and research to become a true innovator in your field. You'll gain valuable industry experience with internship opportunities, real-world projects and exciting innovation challenges with industry mentors.

Graduate ready to make an impact

You'll graduate with both an undergraduate and a professionally accredited masters degree giving you a higher-level qualification that is recognised by employers globally. We're accredited by Engineers Australia, EUR-ACE and more.

#1 **#31**
in Australia globally

for Computer Science and Information Systems

#1 **#31**
in Australia globally

for Data Science and Artificial Intelligence

#1 **#45**
in Australia globally

for Mechanical, Aeronautical and Manufacturing Engineering*

*QS World University Rankings By Subject 2026



Student experience

Scan to
learn more



At Melbourne, engineering and information technology offer more than just classroom learning. Engage in a variety of clubs and societies, engage with industry experts and enjoy the vibrant surroundings of one of the world's most exciting cities.

Clubs and Societies

Our student clubs bring together people who are passionate about engineering and information technology and want to make an impact. With over 200 clubs to choose from, you'll connect with people from a range of disciplines, cultural backgrounds and interests. Our clubs include:

- Aerospace and Rocket Engineering Society (ARES)
- Computing and Information Systems Students Association (CISSA)
- Engineering discipline-based clubs
- Engineering Music Society
- Engineers Without Borders (University of Melbourne chapter)
- Melbourne Space Program
- MUR Motorsports
- ENG & IT Community
- Robogals
- Unimelb Rover Team
- Women in Science and Engineering (WISE)
- Women in Technology

Melbourne Accelerator Program

Get your startup off the ground. Apply for the Melbourne Accelerator Program (MAP), a unique startup incubator that gives students the opportunity to forge their careers as entrepreneurs with the support of fellowship grants, office spaces and access to a network of mentors and investors.

Studying overseas

Combine travel and study by taking part of your degree overseas through approved programs worldwide. With 200 university exchange partners and various engineering and information technology partnerships, such as AOTULE and GE3 networks, you'll have numerous opportunities to study at top schools across Asia, Oceania, Europe, and the US.

Scholarships and funding options are available for short-term or semester-long programs, making it possible to explore different countries during your degree.

Build your capabilities

The Careers and Employability team provides programs and services to students free of charge, including screened job listings, workshops, practice interviews, industry events and connections with alumni. You can even attend a free Career Bootcamp.

Academic mentoring

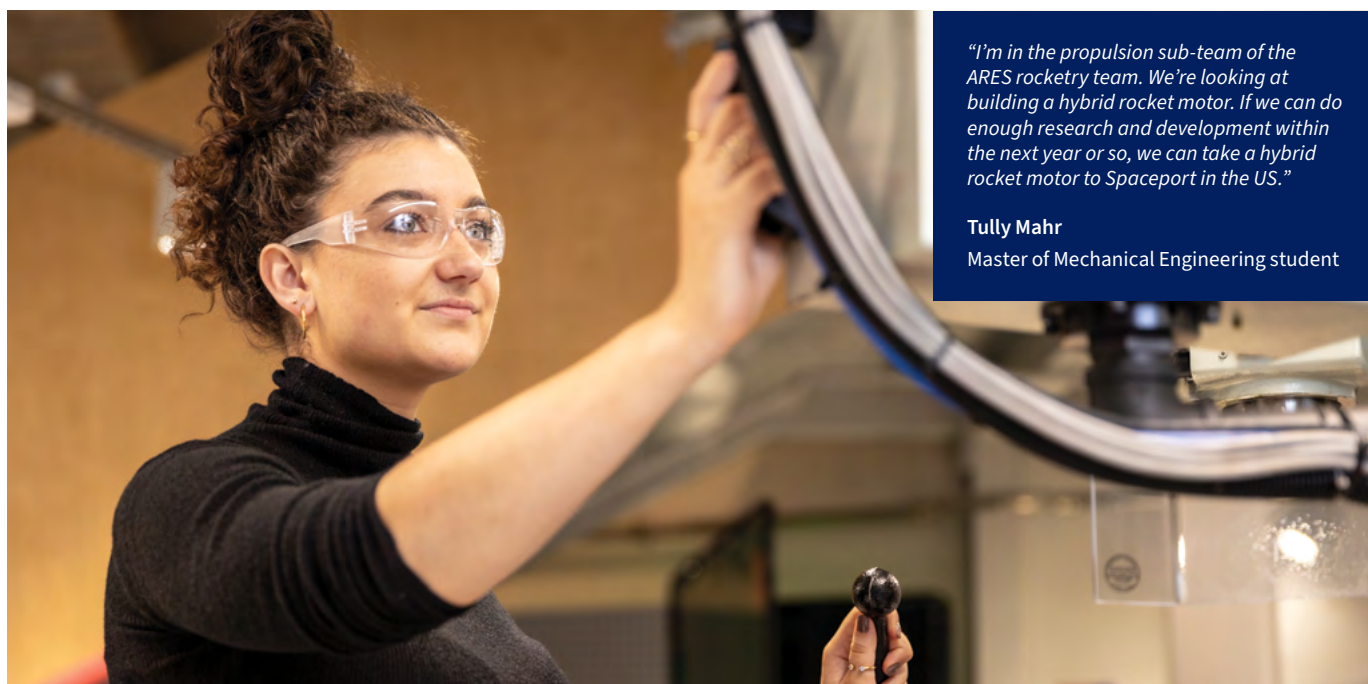
Every student gets the chance to connect with an academic from your faculty. These meetings are a safe space to chat about what you want to get out of your studies, explore your interests, discuss personal goals, and get tips for navigating university life in general. Throughout your studies, you'll also be able to explore career and graduate study options with alumni and industry mentors.

Melbourne Peer Mentor Program

As a new undergraduate student, you're automatically enrolled into this program, which matches you with a later-year student and other first-year students in your faculty. You'll meet with your group five times, meet new people, make connections, and discover what uni is all about. You can then develop your leadership skills from your second year onwards by signing up to become a Peer Mentor yourself!

Melbourne Plus

Your uni journey extends beyond lectures. It's also about finding who you are, your passions and your people. Melbourne Plus is the University's co-curricular recognition program, with over 150 activities to discover. Build your skills, strengthen your employability and earn university-verified digital credentials. Plus, you get to explore your interests, have fun and meet like-minded students.



"I'm in the propulsion sub-team of the ARES rocketry team. We're looking at building a hybrid rocket motor. If we can do enough research and development within the next year or so, we can take a hybrid rocket motor to Spaceport in the US."

Tully Mahr
Master of Mechanical Engineering student

Your study experience

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learn more



How the Melbourne curriculum works

You start with a three-year bachelors degree. Once completed, you can enter the workforce with a deep knowledge base and career ready skill set. Or, go on to gain advanced training through graduate coursework or research.

What is a major?

Making up one third of your subjects, a major is the subject area you'll focus on during your undergraduate degree. Each degree has a different set of majors.

In your first year, you can focus on your major straight away or explore other subjects before deciding on what major you want to pursue.

What is a minor?

A minor is a shortened sequence of subjects taken from a major that allows you to explore another field of interest in addition to your main area of study.

What is breadth?

Breadth is a key feature of your Melbourne curriculum undergraduate degree that allows you to study a wide range of subjects from outside your home faculty. Through breadth, you will develop a broader range of skills and can explore interests that may not traditionally be available within your main field of study.

What is a specialisation?

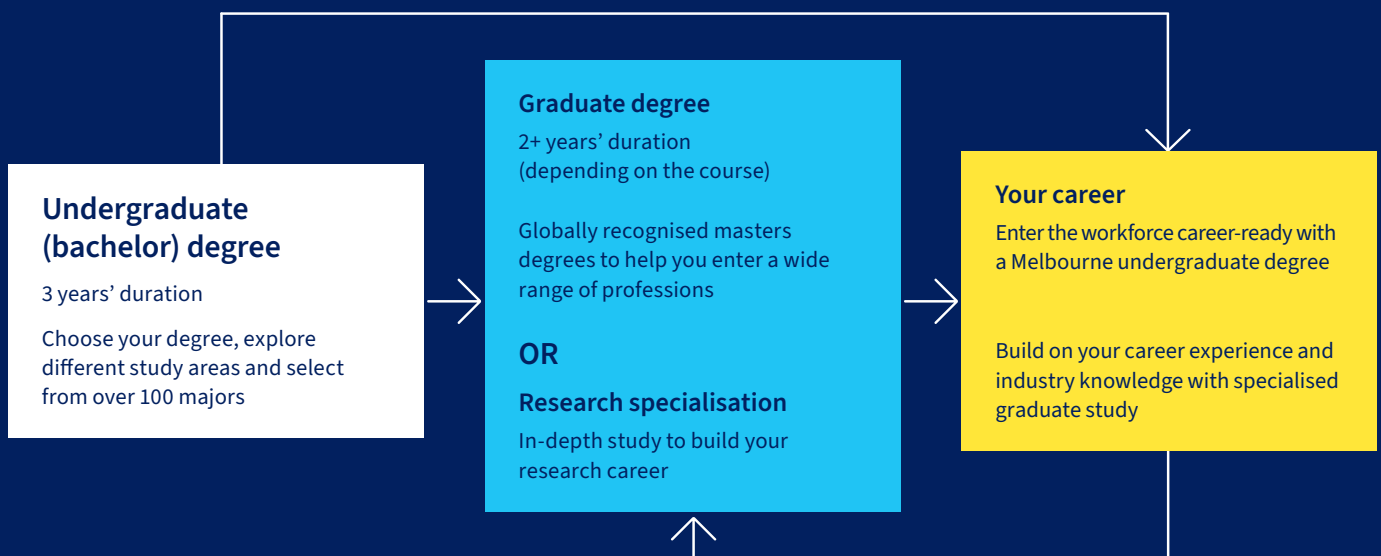
A specialisation is an optional set of subjects within a particular field of your choosing that can complement your degree.

You can choose a specialisation that pertains to a particular career path or industry of your interest.

For example: if you are studying the Master of Electrical Engineering, you could choose to specialise in Low-Carbon Power Systems to become a power system practitioner.

To complete a specialisation, you'll need to complete specific subjects to qualify. These subjects build on the expertise you'll develop throughout your degree and can demonstrate to potential employers that you're an expert in a specific field. You don't need to apply for a specialisation, but some subjects may have prerequisites.

Your pathway from study to career



Your study options

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learn more



Bachelor of Biomedicine, Design, or Science

To be eligible for the two-year Master of Engineering, choose an engineering major in the Bachelor of Biomedicine, Design or Science. As a Melbourne graduate, you'll be guaranteed a Commonwealth Supported Place (CSP) or international fee place into the Master of Engineering if you achieve a Weighted Average Mark (WAM) of 65% or higher in your bachelors degree.

Graduate Degree Package

Enrol into both a University of Melbourne bachelors degree and Master of Engineering or Information Technology (IT) degree. Graduate Degree Packages into the Master of Engineering or IT are available through the Bachelors of Biomedicine or Science for students who achieve a 95.00 ATAR or above or through the Bachelors of Commerce for students who achieve a 90.00 ATAR or above. This option guarantees your CSP or International fee place in the Master of Engineering or IT. A Graduate Degree Package has its own course code, so if you're not sure what ATAR to expect or want to keep your choices open, you can still enrol in the individual undergraduate degree – just indicate it as a separate preference in VTAC.

International applicants with an overseas qualification can apply for a Graduate Degree Package by indicating this in their direct application to the University.

Bachelor of Commerce

This pathway is ideal if you're looking to combine business skills like management, finance or accounting with technical knowledge in engineering or information technology to lead into a broad range of career options in engineering, information technology, business or consultancy.

High-achieving students can enrol in the Bachelor of Commerce/Master of Engineering or IT Graduate Degree Package (GDP). You will be guaranteed a Commonwealth Supported Place or international fee place into the three-year Master of Engineering or two-year Master of Information Technology, provided you meet the maths and science entry requirements.

Bachelor of Commerce students who intend to progress to the Master of Engineering will be permitted to complete the four prerequisite first year subjects using breadth.

Any bachelor degree

If you study any University of Melbourne undergraduate degree without an engineering major you are still guaranteed a CSP or international fee place in the Master of Engineering, Master of Information Technology or Master of Information Systems provided you achieve a WAM of 65% or higher in your bachelors degree, and meet the prerequisite requirements.

If you follow this path, you'll be eligible for the three-year Master of Engineering or the two-year Master of Information Technology or Master of Information Systems.

Melbourne Chancellor's Scholarship

The Melbourne Chancellor's Scholarship guarantees high-achieving students entry into the Master of Engineering. It is available to students who complete Year 12 or the International Baccalaureate (IB) in Australia and who achieve an ATAR of 99.90 or higher.

Sample course plan: Bachelor of Commerce satisfying prerequisites for a 3-year Master of Engineering^①

Step 1: Study Bachelor of Commerce using breadth to study prerequisites for Engineering^②

Bachelor of Commerce (Finance major, satisfying prerequisite for a 3-year Master of Engineering with physics prerequisites)^③

Year 1	Semester 1	Introductory Microeconomics	Accounting Reports and Analysis	Quantitative Methods 1	Calculus 2
	Semester 2	Introductory Macroeconomics	Principles of Finance	Principles of Management	Physics 1
Year 2	Semester 1	Quantitative Methods 2	Commerce elective	Corporate Financial Decision Making	Physics 2: Physical Science and Technology
	Semester 2	Commerce elective	Financial Markets and Institutions	Linear Algebra	Commerce elective
Year 3	Semester 1	Commerce elective	Commerce elective	Investments	International Finance
	Semester 2	Commerce elective	Derivative Securities	Commerce elective	Breadth / Commerce Elective

BCom compulsory subjects
Major foundation subjects
Major subjects
Breadth subjects
Elective subjects

Learn more at <https://eng.unimelb.edu.au/students/preeng-it/commerce-pathway>.

- ^① BCom students must complete four prerequisite subjects to meet entry requirements for the three-year Master of Engineering: two specified maths subjects and two first year science subjects (relevant to your chosen engineering stream).
- ^② This is a sample course plan only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.
- ^③ A combination of economics and econometrics subjects is required to be awarded the Economics major. For full details, please see the University Handbook. The selected major subjects at level 3 are required for entry into honours in economics.

The Creator Space

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learn more



The Creator Space offers various specialised areas dedicated to different aspects of the creation process.

The Creator Space offers equipment training and support to assist you in transforming your ideas into prototypes.

Spanning two floors, this space is equipped with 3D printers, laser cutters, electronics workbenches featuring oscilloscopes, functional generators, power suppliers, soldering stations, and a reflow oven for printed circuit boards.

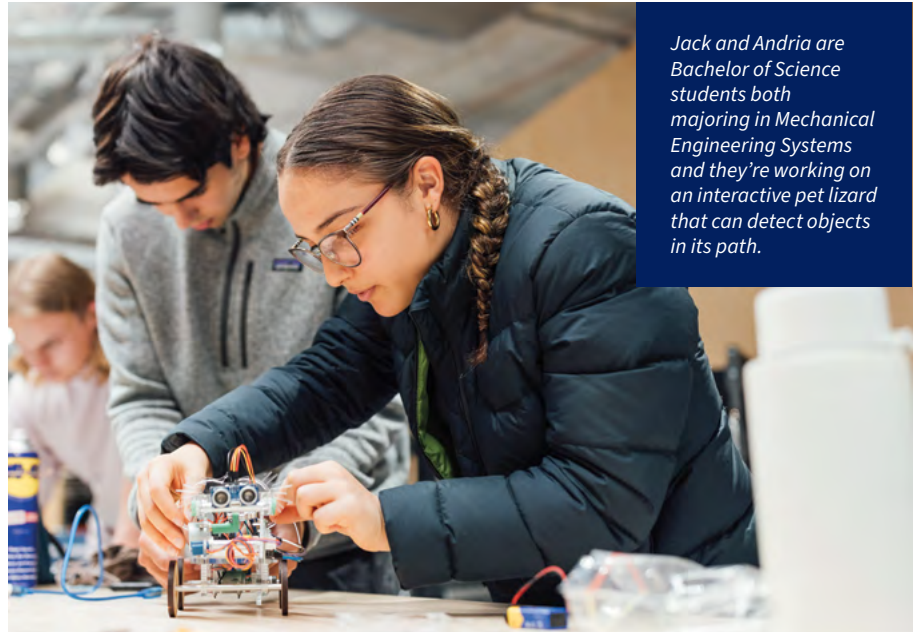
The Wood Shop provides the necessary tools for traditional woodworking tasks like cutting, turning, sanding, and shaping wood and plastics.

Similarly, the Metal Shop contains traditional metal fabrication machines suitable for cutting, bending, drilling, grinding, and assembling steel and aluminium structures.

Additionally, there are CNC machines, as well as manual milling and lathe machines, which offer insights into the machinery used in various industries.

The Creator Space is continuously evolving to meet the ever-changing demands of the industry, ensuring that graduates are equipped and skilled with the latest fabrication methods and technologies.

Check out a virtual tour of The Creator Space here: <https://go.unimelb.edu.au/7djs>.



Jack and Andria are Bachelor of Science students both majoring in Mechanical Engineering Systems and they're working on an interactive pet lizard that can detect objects in its path.

Endeavour Exhibition

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Turn your ideas into real-world impact.

The Endeavour Exhibition showcases projects created by our engineering and IT students in partnership with industry, government and research organisations. You'll apply what you learn in class to solve real problems, working on projects over a semester or a year. Held twice a year, the exhibition brings together students, industry partners and the public to celebrate innovation, with awards, prizes and a People's Choice vote. Along the way, you'll build presentation and networking skills, create posters, prototypes or simulations, and gain valuable experience showcasing your work.



Master of Mechatronics Engineering student Talib and his Endeavour group designed a motor-assisted Water Pump Cart for agricultural use in the Pursat region of Cambodia. Using human-centred design principles, the team transformed an e-bike - a resource readily available in Cambodia - into a cart capable of hauling water, food, and other heavy materials. Designed to be built, installed, and maintained locally, the cart addresses issues with labor shortages, landmines and the national disability rate.

In The Creator Space, they've used the general maker areas for assembling their cart, the electronics to work with wiring the pump and testing, the metal shop for building the frame and the various machines to help with creating materials.

How to study Engineering at Melbourne

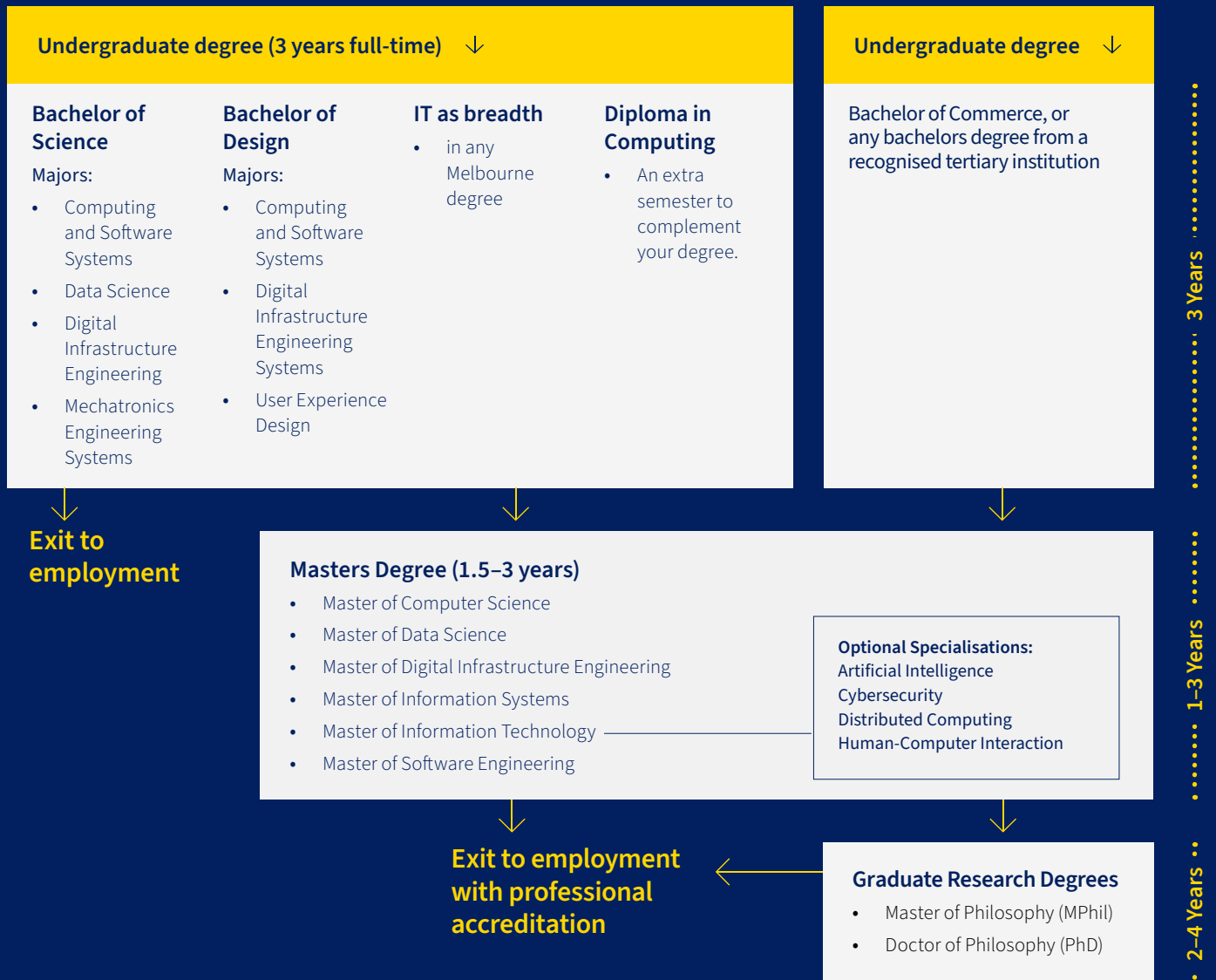
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You can choose a Graduate Degree Package and apply for a bachelors and engineering masters degree at the same time.

How to study Information Technology at Melbourne

Scan to learn more



You can choose a Graduate Degree Package and apply for a bachelors and information technology masters degree at the same time.

Biomedical Engineering

Scan to
learn more



Meet the health challenges of the future with a degree in biomedical engineering. Biomedical engineering offers a mix of innovation, impact, and interdisciplinary collaboration to address global health challenges.

What is biomedical engineering?

Biomedical engineering blends engineering with biology and medicine to create breakthroughs in healthcare from advancing diagnostic tools to designing life-saving medical devices.

What should I study?

Start with an undergraduate degree with a major in Biomedical Engineering Systems (3 years full-time), then progress to a Master of Biomedical Engineering (2-3 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Biomedicine
- Bachelor of Science

Student experience

As a biomedical engineering student, you'll join a global community committed to improving lives beyond the classroom. You'll connect with peers and lecturers through classes, student societies, and industry-linked activities, while exploring your interests and applying your skills to real-world challenges. From contributing to groundbreaking medical technology research alongside our researchers to building practical experience and professional networks, you'll develop a strong sense of belonging within the department and

the wider biomedical engineering community.

Your career

Access career opportunities as a biomedical engineer in industries such as biotechnology, hospitals, R&D, biomedical research institute, pharmaceuticals, medical devices or create your own startup.

Our graduates are working at organisations such as the Bionics Institute, Medtronic, Stryker, Chemtronics, Planet Innovation, Therapeutics Goods Australia, Government, Cochlear and 4DMedical.

Optional specialisations

In the Master of Biomedical Engineering you can choose from these optional specialisations:

- Business: Study tailored business subjects in partnership with the Melbourne Business School covering economics, marketing and finance that relate to engineering.

Sample course plan

Bachelor of Science (Biomedical Engineering Systems Major)

Year 1	Semester 1	Engineering Technology and Society	Calculus 2	Foundational Biology: Life's Machinery	Today's Science, Tomorrow's World
	Semester 2	Engineering Modelling and Design	Linear Algebra	Chemistry 1	Breadth subject
Year 2	Semester 1	Engineering Mathematics	Applied Computation in Bioengineering	Science elective	Breadth subject
	Semester 2	Anatomy and Physiology for Bioengineering	Science elective	Science elective	Breadth subject
Year 3	Semester 1	Mechanics for Bioengineering	Circuits and Systems	Science elective	Breadth subject
	Semester 2	Introduction to Biomaterials	Biosystems Design	Science elective	Breadth / Science elective

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Biomedical Engineering

Year 1	Semester 1	Biomechanics	Bioengineering Data Analytics	Bioinstrumentation	Bioengineering elective
	Semester 2	Biofluid Mechanics	Biosignal Processing	Interdisciplinary Design for Engineers	Bioengineering elective
Year 2	Semester 1	Biomedical Engineering Capstone Project	Biomedical Engineering Management & Regulations	Bioengineering elective	Approved elective
	Semester 2		Bioengineering elective	Bioengineering elective	Approved elective

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Chemical Engineering

Scan to
learn more



Address the food, resources, energy and water challenges of the future. With a degree in Chemical Engineering, you can implement processes and new technologies to establish the circular economy.

What is chemical engineering?

Chemical engineers use their understanding of chemistry and biology to create solutions in resources and a circular economy, recycling and waste stream management, energy supply, food and pharmaceutical production, and water treatment solutions.

What should I study?

Start with an undergraduate degree with a major in Chemical Engineering Systems (3 years full-time), then progress to a Master of Chemical Engineering (2–3 years full-time). This major is available in the following undergraduate degree:

- Bachelor of Science

Your career

Access career opportunities as a chemical engineer in industries such as manufacturing, food and beverage production, future fuels, renewables and energy storage, pharmaceuticals, waste recycling and water treatment. Our engineering graduates are working at organisations such as Bulla Dairy Foods, Carlton & United Breweries, CSL, ExxonMobil, Mars Chocolate Australia and Melbourne Water.

Optional specialisations

In the Master of Chemical Engineering you can choose from these optional specialisations:

- Business: Study tailored subjects on economics, marketing and finance.
- Materials and minerals: Explore the technology that underpins materials production or mineral processing.
- Sustainability and environment: Address the challenges in producing sustainable fuels, foods and chemicals for the future.

Sample course plan

Bachelor of Science (Chemical Engineering Systems Major)

Year 1	Semester 1	Engineering Technology and Society	Calculus 2	Chemistry 1	Today's Science, Tomorrow's World
	Semester 2	Engineering Modelling and Design	Linear Algebra	Chemistry 2	Breadth subject
Year 2	Semester 1	Fundamentals of Chemical Engineering	Material and Energy Balances	Science elective	Breadth subject
	Semester 2	Digitisation in the Process Industries	Engineering Mathematics	Science elective	Breadth subject
Year 3	Semester 1	Reactors & Catalysts	Fluid Mechanics	Science elective	Breadth subject
	Semester 2	Momentum, Mass and Heat Transfers	Safety and Sustainability Case Studies	Science elective	Breadth / Science elective

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Chemical Engineering (Sustainability and environment specialisation)

Year 1	Semester 1	Chemical Engineering Thermodynamics	Advanced Separation Processes	Sustainable Bioprocessing	Interdisciplinary Design for Engineers
	Semester 2	Design and Construction of Equipment	Chemical Engineering Management	Wastewater and Environmental Remediation	Energy, Emissions and Pollution Control
Year 2	Semester 1	Process Engineering	Process Simulation and Control	Chemical Engineering Research Project or Internship	
	Semester 2	Chemical Engineering Design Project		Chemical Engineering elective	Particle Technology

Core subjects Elective subjects Specialisation subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Civil Engineering

Scan to
learn more



Reimagine sustainable solutions for our cities with a degree in Civil Engineering. Prepare regions, cities and towns to handle increasing populations, finite resources and extreme events.

What is Civil Engineering?

Civil engineering can cover a broad range of areas, such as structural, construction, geotechnical, transport, and water. Civil engineers plan, design and construct the built environment, providing essential services and infrastructure.

What should I study?

Start with an undergraduate degree with a major in Civil Engineering Systems (3 years full-time), then progress to a Master of Civil Engineering (2–3 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Design
- Bachelor of Science

Your career

You could work as a civil engineer in industries such as aerospace, construction, oil and gas, transport and water resources. Our engineering graduates are working in organisations such as AECOM, BHP Billiton, City West Water, Golder Associates, Melbourne Metro Rail Authority and Shell.

Optional specialisations

In the Master of Civil Engineering you can choose from these optional specialisations:

- Business: Study tailored business subjects developed in partnership with the Melbourne Business School.
- Energy: Design digital systems for sustainable energy.
- Geotechnical: Design, construct and manage emerging renewable energy platforms, geotechnical structures, energy geo-structures, and high-rise structures and tunnels.
- Project Management: Effectively evaluate opportunities, mitigate risks, and address sustainability needs.
- Structural: Design, develop and evaluate the load-bearing structural systems used in buildings, bridges and other infrastructure like tunnels and dams.
- Transport: Plan, design, construct, and manage transport infrastructure,
- Water Resources: Analyse, design, operate and maintain urban water supply systems, waste-water management systems, and urban water environment.

Sample course plan

Bachelor of Design (Civil Engineering Systems Major)

Year 1	Semester 1	Calculus 1	Engineering Technology and Society	Design elective	Physics 1
	Semester 2	Calculus 2	Linear Algebra	Design elective	Physics 2
Year 2	Semester 1	Sustainable Infrastructure Engineering	Design elective	Design elective	Breadth subject
	Semester 2	Engineering Materials	Earth Processes for Engineering	Engineering Mathematics	Breadth subject
Year 3	Semester 1	Fluid Mechanics	Engineering Risk Analysis	Design elective	Breadth / Design elective
	Semester 2	Systems Modelling and Design	Structural Theory and Design	Design elective	Breadth / Design elective

Core subjects Elective subjects Breadth subjects Recommended subject

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Civil Engineering

Year 1	Semester 1	Structural Theory and Design 2	Engineering Site Characterisation	Transport Infrastructure Engineering	Geotechnical Engineering
	Semester 2	Engineering Project Implementation	Civil Hydraulics	Transport Systems	Interdisciplinary Design for Engineers
Year 2	Semester 1	Engineering Capstone Project Part 1	Integrated Infrastructure Design	Civil Engineering elective	Civil Engineering elective
	Semester 2	Engineering Capstone Project Part 2	Construction Engineering	Civil Engineering elective	Civil Engineering elective

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Digital Infrastructure Engineering

To find out
more scan
this QR code



Capture, integrate and use data in a digital work environment. You'll work with the Internet of Things (IoT), design and use digital twins, and create digital solutions for asset management, smart and sustainable cities, and disaster management.

What is digital infrastructure engineering?

Digital infrastructure engineering combines engineering and information technology. Digital infrastructure engineers work on digital systems representing our environments, resources and infrastructure to drive sustainable outcomes for businesses, projects and ecosystems.

What should I study?

Start with an undergraduate degree with a major in Digital Infrastructure Engineering Systems (3 years full-time), then progress to a Master of Digital Infrastructure Engineering (2–3 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Design
- Bachelor of Science

Your career

The infrastructure sector in Australia is booming and digital engineering tools like Building Information Modelling (BIM), IoT and virtual reality are increasingly being used. With digital systems becoming required in many industries, you can meet the demand for skilled people to assist with the transition to digital strategies and systems.

Optional specialisations

In the Master of Digital Infrastructure Engineering you can choose from these optional specialisations:

- Artificial Intelligence: Apply core digital infrastructure skills in machine learning and computer vision.
- Business: Study tailored business subjects developed in partnership with the Melbourne Business School.
- Communication Infrastructure: Discover networks like 5G and the IoT.
- Construction: Build and manage buildings using data such as digital twins.
- Cultural Heritage: Use technology to learn from or improve cultural heritage.
- Energy: Design digital systems for sustainable energy.
- Information Systems: Combine information technology and digital business skills for organisational change.
- Information Technology: Become an expert in programming, internet and digital architecture.
- Land: Interpret surveys on land ownership and combine skills in culture, law and planning.
- Mobility: Improve how we move and build efficient systems.
- Smart Cities: Use digital infrastructure to manage the resources in a smart city.
- Sustainable Cities: Support the sustainable development of our cities.
- Water: Manage our water resources in a sustainable way.

Sample course plan

Bachelor of Design (Digital Infrastructure Engineering Systems Major)

Year 1	Semester 1	Calculus 2	Engineering Technology and Society	Elective subject	Physics 1
	Semester 2	Linear Algebra	Engineering Modelling and Design	Elective subject	Physics 2
Year 2	Semester 1	Sustainable Infrastructure Engineering	Applying Digital Infrastructure	Elective subject	Breadth subject
	Semester 2	Sensing and Measurement	Numerical Methods in Engineering	Elective subject	Breadth subject
Year 3	Semester 1	Imaging the Environment	Engineering Risk Management	Elective subject	Breadth subject
	Semester 2	Digital Infrastructure Systems Capstone	Integrating Digital Infrastructure	Elective subject	Breadth/Design elective

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Digital Infrastructure Engineering (Water Specialisation)

Year 1	Semester 1	Spatial Data Management	Spatial Data Analytics	Advanced Imaging	Interdisciplinary Design for Engineers
	Semester 2	Positioning Principles and Technologies	Building Information Modelling	Information Visualisation	Remote Sensing
Year 2	Semester 1	Quantitative Environmental Modelling	Integrated River & Catchment Management	Engineering Capstone Project Part 1	The Ethics of Artificial Intelligence
	Semester 2	Water and Waste Management	Environmental Analysis Tools	Engineering Capstone Project Part 2	Engineering Project Implementation

Core subjects Elective subjects Specialisation subjects Selective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Electrical Engineering

Scan to
learn more



Electrical systems power our everyday lives, from energy efficient power grids to life-changing medical devices. Learn to design, build and improve these valuable systems with a degree in electrical engineering.

What do electrical and electronic engineers do?

Electrical engineers design and manage the electrical systems that meet the practical needs of our world. This includes autonomous systems, electronics, power distribution, sensors, telecommunications and information processing. As a graduate, you'll have analytical skills, knowledge of the latest technologies and the ability to work on large and small scale systems.

What should I study?

Start with an undergraduate degree with a major in Electrical Engineering Systems (3 years full-time), then progress to a Master of Electrical Engineering (2-3 years

full-time). This major is available in the following undergraduate degree:

- Bachelor of Science

Your career

You could work as an electrical engineer in industries such as automation, broadcast or sound engineering, power generation and transmission, and telecommunications.

Our engineering graduates work in organisations such as Accenture, AECOM, Deloitte, ExxonMobil, Google, Tesla and Telstra.

Optional specialisations

In the Master of Electrical Engineering you can choose from these optional specialisations

- Artificial Intelligence: Design, implement and analyse machines that learn, plan and reason covering topics like machine learning and digital ethics.
- Autonomous Systems: Develop methods and approaches to design and control autonomous systems from robotics to drones.
- Business: Study tailored subjects covering economics, marketing and finance.
- Intelligent Communications and Networks: Discover the technologies behind communication networks like 5G and IoT, and learn how to design the communication systems for the future.
- Electronics and Embedded Systems: Design and build the electronic, embedded and opto-electronic systems for applications in modern communications, computing, instrumentation and sensing.
- Low-carbon Power Systems: Gain expertise in low-carbon power systems, energy markets, and the integration of renewables, distributed energy, and smart grid technologies.

Sample course plan

Bachelor of Science (Electrical Engineering Systems Major)

Year 1	Semester 1	Today's Science, Tomorrow's World	Calculus 2	Physics 1	Engineering Technology and Society
	Semester 2	Engineering Modelling and Design	Linear Algebra	Physics 2: Physical Science and Technology	Breadth subject
Year 2	Semester 1	Introduction to Numerical Computation in C	Engineering Mathematics	Digital Systems	Breadth subject
	Semester 2	Foundations of Electrical Networks	Science elective	Science elective	Breadth subject
Year 3	Semester 1	Signals and Systems	Electrical Network Analysis and Design	Science elective	Breadth subject
	Semester 2	Electrical Device Modelling	Electronic System Implementation	Science elective	Breadth / Science elective

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Electrical Engineering (Artificial Intelligence Specialisation)

Year 1	Semester 1	Probability and Random Models	Control Systems	Electronic Circuit Design	Introduction to Power Engineering
	Semester 2	Communication Systems	Signal Processing	Embedded System Design	Interdisciplinary Design for Engineers
Year 2	Semester 1	Engineering Capstone Project Part 1	System Optimisation and Machine Learning	Modelling and Analysis for AI	Electrical Engineering elective
	Semester 2	Engineering Capstone Project Part 2	Applied Deep Learning for Engineers	Reinforcement Learning for Engineers	Electrical Engineering elective

Core subjects Elective subjects Specialisation subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Environmental Engineering

Scan to
learn more



Improve the liveability of our cities and sustainability of our resources with a degree in environmental engineering. Tackle the global challenges we face in water shortages, climate change and environmental and waste management.

What is environmental engineering?

Environmental engineers design and build sustainable solutions to problems such as climate change, water scarcity, renewable energy and bushfire management.

What should I study?

Start with an undergraduate degree with a major in Environmental Engineering Systems (3 years full-time), then progress to a Master of Environmental Engineering (2–3 years full-time). This major is available in the following undergraduate degree:

- Bachelor of Science

Your career

You could work as an environmental engineer in industries such as conservation, renewable energy, mining, sustainability programs, waste management and water resources. Our engineering graduates are working in organisations such as Alluvium Consulting, Bureau of Meteorology, Jacobs, Melbourne Water and Woodside Energy.

Optional specialisations

In the Master of Environmental Engineering you can choose from these optional specialisations:

- Earth Observation: Study the imaging and analysis systems used to create sustainable landscapes and agriculture.
- Energy Systems: Explore energy efficiency and renewables to ensure low or zero carbon emissions.
- Water Systems: Study the systems that underpin the sustainable development of water systems.

Sample course plan

Bachelor of Science (Environmental Engineering Systems Major)

Year 1	Semester 1	Foundational Biology: Life's Machinery	Calculus 2	Physics 1	Today's Science, Tomorrow's World
	Semester 2	Engineering Modelling and Design	Linear Algebra	Physics 2	Breadth subject
Year 2	Semester 1	Analysis of Biological Data	Sustainable Infrastructure Engineering	Science elective	Breadth subject
	Semester 2	Earth Processes for Engineering	Engineering Mathematics	Science elective	Breadth subject
Year 3	Semester 1	Fluid Mechanics	Intro to Sustainable Water Management	Science elective	Breadth subject
	Semester 2	Environmental Engineering Systems Capstone	Environmental Systems Modelling and Design	Science elective	Breadth / Science elective

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Environmental Engineering (Specialisation in Energy Systems)

Year 1	Semester 1	Quantitative Environmental Modelling	Engineering Hydrology	Spatial Data Analytics	Water Planning & An Uncertain Future
	Semester 2	Monitoring Environmental Impacts	Environmental Analysis Tools	Civil Hydraulics	Interdisciplinary Design for Engineers
Year 2	Semester 1	Engineering Capstone Project Part 1	Environmental Engineering elective	Solid Wastes to Sustainable Resources	System Optimisation and Machine Learning
	Semester 2	Engineering Capstone Project Part 2	Engineering Project Implementation	Energy Efficiency Technology	Offshore Wind Geotechnical Engineering

Core subjects Elective subjects Selective subject Specialisation subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Industrial Engineering

Scan to
learn more



With a degree in industrial engineering, you'll gain skills to improve processes, services and systems. Develop a comprehensive skill set in manufacturing technologies, systems and simulation, operations techniques, sustainability, and digital transformation, along with business management.

What is industrial engineering?

Industrial engineering is the branch of engineering that involves figuring out how to make or do things better. Industrial engineers look at how to improve processes or design things that are more efficient and waste less money, time, raw materials,

person-power and energy while achieving customer requirements and meeting regulatory obligations. They use knowledge and skills in the mathematical, physical and social sciences together with the principles and methods of engineering analysis and design for almost every industry sector from manufacturing to technology, services and healthcare.

What should I study?

Start with an undergraduate degree in any Engineering Systems major (3 years full-time), then progress to a Master of Industrial Engineering (2 years full-time).

Your career

Industrial engineers could work in various industries from manufacturing and processing, to healthcare, banking and consulting. You'll be able to build a career that focuses on doing things better, and you'll have access to work-integrated learning projects and industrial grounding activities while you study so you can get relevant work experience or find a potential mentor.

Sample course plan

Bachelor of Science (Mechanical Engineering Systems Major)

Year 1	Semester 1	Engineering Technology and Society	Calculus 2	Physics 1	Today's Science, Tomorrow's World
	Semester 2	Engineering Modelling and Design	Linear Algebra	Physics 2: Physical Science and Technology	Breadth subject
Year 2	Semester 1	Numerical Methods in Engineering	Engineering Mechanics	Science elective	Breadth subject
	Semester 2	Foundations of Electrical Networks	Engineering Mathematics	Science elective	Breadth subject
Year 3	Semester 1	Thermodynamics and Fluid Mechanics	Mechanics and Materials	Science elective	Breadth subject
	Semester 2	Systems Modelling and Analysis	Mechanical Systems Design	Science elective	Breadth / Science elective

Recommended subjects Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Industrial Engineering

Year 1	Semester 1	Industrial Engineering	Design and Manufacturing Practice	Manufacturing Processes and Technology	Supply Chain Management
	Semester 2	Industrial Systems and Simulation	Interdisciplinary Design for Engineers	Probability, Reliability and Quality	Manufacturing Automation and Information Technology
Year 2	Semester 1	Engineering Capstone Project Part 1	Optimisation for Industry	Economic Analysis for Engineers	Industrial Engineering elective
	Semester 2	Engineering Capstone Project Part 2	Sustainable and Life Cycle Engineering	Industry Digital Transformation	Industrial Engineering elective

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.



"No two days are the same. You could be out in the field taking water samples, on campus building a raingarden or in the lab devising sustainable solutions to solve some of the world's most pressing environmental problems."

Nav De Silva

Environmental Engineering
Systems major

Master of Environmental Engineering

Mechanical Engineering

Scan to
learn more



Design and build tomorrow's machines and systems, from small scale devices to airplanes and spacecraft. Turn energy into power and motion, gaining skills in mechanical design, manufacturing, thermodynamics, fluid mechanics and more.

What is mechanical engineering?

Mechanical engineering focuses on turning energy into power and motion, spanning industries and agencies such as aeronautics, healthcare, climate prediction, robotics and manufacturing.

What should I study?

Start with an undergraduate degree with a major in Mechanical Engineering Systems (3 years full-time), then progress to a Master of Mechanical Engineering (2-3 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Design
- Bachelor of Science

Your career

As a Melbourne graduate, you'll be equipped to work as a mechanical engineer in industries such as aerospace, biomechanics, manufacturing, healthcare, weather and climate prediction, minerals, energy, robotics, transport and more.

Our mechanical engineering graduates are working in companies such as Arup, CSIRO, BHP, Mars Australia, Telstra and Yarra Trams.

Optional specialisations

In the Master of Mechanical Engineering you can choose from these optional specialisations:

- Aerospace: Develop advanced skills in fluid mechanics, propulsion, aeroelasticity and aerospace control.
- Business: Study tailored subjects covering economics, marketing and finance.
- Manufacturing: Build knowledge and competence in manufacturing process and technologies, production system design and operation management, factory automation, and product quality and reliability.

Sample course plan

Bachelor of Design (Mechanical Engineering Systems Major)

Year 1	Semester 1	Calculus 1	Physics 1	Design elective	Breadth subject
	Semester 2	Calculus 2	Physics 2	Linear Algebra	Breadth subject
Year 2	Semester 1	Numerical Methods in Engineering	Design elective	Design elective	Breadth subject
	Semester 2	Foundation of Electrical Networks	Engineering Mathematics	Engineering Mechanics	Breadth subject
Year 3	Semester 1	Thermodynamics and Fluid Mechanics	Mechanics and Materials	Design elective	Breadth / Design elective
	Semester 2	Systems Modelling and Analysis	Mechanical Systems Design	Design elective	Breadth / Design elective

Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Mechanical Engineering (Aerospace specialisation)

Year 1	Semester 1	Thermodynamics	Dynamics	Materials Engineering	Design and Manufacturing Practice
	Semester 2	Fluid Dynamics	Solid Mechanics	Control Systems	Interdisciplinary Design for Engineers
Year 2	Semester 1	Engineering Capstone Project Part 1	Advanced Fluid Dynamics	Aerospace Dynamics and Control	Mechanical Engineering elective
	Semester 2	Engineering Capstone Project Part 2	Vibrations and Aeroelasticity	Aerospace Propulsion	Mechanical Engineering elective

Core subjects Elective subject Specialisation subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Mechatronics Engineering

Scan to
learn more



Want a career where you control robots? Mechatronics is a blend of mechanical, electrical and software engineering, and the key to a 'smart' and connected future.

What is mechatronics engineering?

Mechatronics drives the development of 'smart' computer-controlled products, such as robots, drones, automotive equipment and medical imaging systems.

What should I study?

Start with an undergraduate degree with a major in Mechatronics Engineering Systems (3 years full-time), then progress to a Master of Mechatronics Engineering (2-3 years full-time). This major is available in the following undergraduate degree:

- Bachelor of Science

Your career

You could work as a mechatronics engineer in industries such as aerospace, advanced manufacturing, computing and electronics, mining and robotics. Our engineering graduates work in organisations such as IBM, Telstra, Ford, KPMG and Alerte Digital Health.

Optional specialisation

In the Master of Mechatronics Engineering you can choose this optional specialisations:

- Manufacturing: Leverage your mechatronics skills to create innovative products and services for the flexible modern economy, with a strong grounding in physical manufacturing systems.

Sample course plan

Bachelor of Science (Mechatronics Engineering Systems Major)

Year 1	Semester 1	Engineering Technology and Society	Calculus 2	Physics 1	Today's Science, Tomorrow's World
	Semester 2	Engineering Modelling and Design	Linear Algebra	Physics 2: Physical Science and Technology	Breadth / Science elective
Year 2	Semester 1	Intro to Numerical Computation in C	Engineering Mathematics	Science elective	Breadth subject
	Semester 2	Foundations of Electrical Networks	Engineering Mechanics	Science elective	Breadth subject
Year 3	Semester 1	Analog and Digital Electronics Concepts	Science elective	Science elective	Breadth subject
	Semester 2	Mechanical Systems Design	Systems Modelling and Analysis	Numerical Algorithms in Engineering	Breadth subject

Core subjects Elective subjects Breadth subjects Recommended subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Mechatronics Engineering

Year 1	Semester 1	Control Systems	Dynamics	Sensor Systems	Embedded Systems Design
	Semester 2	Mechatronics System Design	Analog and Digital Electronics Concepts	Introduction to Machine Learning	Interdisciplinary Design for Engineers
Year 2	Semester 1	Mechatronics Engineering elective	Mechatronics Engineering electives	Industrial Engineering	Engineering Capstone Project Part 1
	Semester 2	Mechatronics Engineering elective	Probability, Reliability and Quality	Manufacturing Automation and IT	Engineering Capstone Project Part 2

Core subjects Elective subjects Specialisation subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Information Technology

Scan to
learn more



Computers are central to everything we do as data becomes more important for decision making and technology becomes more powerful. You can be a part of finding new ways to use tech or building the new tech that could change the way we work.

What should I study?

Information technology at Melbourne is flexible - you can study information technology through your bachelor degree as a major or specialise further and receive professional accreditation with a masters. Undergraduate majors are available through:

- Bachelor of Design
- Bachelor of Science

You can then progress to graduate study with options to pursue technical expertise, business analytics skills, research and more.

Your career

Build a career as an app developer, data analyst, digital copywriter, games developer, information technology consultant, data scientist and more. If you focus on the information technology, you can build the technical skills that help us understand and develop new technologies.

Optional specialisations

In the Master of Information Technology students may choose not to specialise and use elective subjects to develop skills for a career in app development, data analytics, game development and more. Or you may choose one of the following optional specialisations:

- Artificial Intelligence: Design, implement and analyse machines that learn, plan and reason covering topics like machine learning and digital ethics.

- Cybersecurity: Create new technologies to improve security covering topics like cryptography and security analytics.
- Distributed Computing: Manage large quantities of data through networks and cover topics like distributed algorithms and parallel computing.
- Human-Computer Interaction: Create the next generation of interfaces with knowledge in user experience and social computing.

Sample course plan

Bachelor of Science (Computing and Software Systems major)

Year 1	Semester 1	Foundations of Computing	Calculus 1	Science elective	Today's Science, Tomorrow's World
	Semester 2	Foundations of Algorithms	Calculus 2	Science elective	Breadth subject
Year 2	Semester 1	Design of Algorithms	Elements of Data Processing	Science elective	Breadth subject
	Semester 2	Object Oriented Software Development	Database Systems	Science elective	Breadth subject
Year 3	Semester 1	Software Modelling and Design	Computer Systems	Science elective	Breadth subject
	Semester 2	Information Technology Project	Models of Computation	Science elective	Breadth/Science elective

Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Information Technology (Cybersecurity specialisation)

Year 1	Semester 1	Distributed Systems	Software Processes and Management	Program and Software Development	Advanced Specialisation elective
	Semester 2	Cyber Security Management	Security and Software Testing	Advanced Specialisation elective	Advanced Specialisation elective
Year 2	Semester 1	IT elective	Web Security	Software Project	

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Information Systems

Scan to
learn more



Support businesses to use and benefit from technology. This could mean integrating cloud computing, creating cybersecurity networks or interpreting data to help a business make the best decisions.

What should I study?

You can combine technology and business skills in multiple undergraduate study areas for either your major, breadth or electives through:

- Bachelor of Design
- Bachelor of Science
- Bachelor of Commerce

A Computing and Software Systems major could be combined with business electives to give you an overview of the potential tech can have in shaping how companies work. Or a User Experience Design major can help you focus on what people want and how they use different kinds of technology.

All of this can lead to graduate study such as the Master of Information Systems where you'll blend technological and organisational skills to transform how we work.

Your career

With information systems, you'll connect the technological potential of software with the business problems that need solving, or processes that need improving. This means you could work in any industry that uses, or could benefit from, using technology.

This could mean a career in process design, consulting or project management. Combine your knowledge in data science, data visualisation and computing to improve how we use technology.

Sample course plan

Bachelor of Design (Computing and Software Systems major)

Year 1	Semester 1	Media Computation	Calculus 1	Design elective	Breadth subject
	Semester 2	Foundations of Algorithms	Calculus 2	Design elective	Breadth subject
Year 2	Semester 1	Design of Algorithms	Elements of Data Processing Design	Design elective	Breadth subject
	Semester 2	Database Systems	Design elective	Design elective	Breadth subject
Year 3	Semester 1	Software Modelling and Design	Computer Systems	Design elective	Breadth/Design elective
	Semester 2	IT Project	Models of Computation	Design elective	Breadth/Design elective

Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Information Systems

Year 1	Semester 1	Concepts in Information Systems	Database Systems and Data Modelling	Digital Business analysis	Introduction to Programming
	Semester 2	Cybersecurity Management	Professional IS Consulting	Skills for IS Research and Development	Information Systems elective
Year 2	Semester 1	Information Technology Project and Change Management	Enterprise Applications & Architectures	Information Systems elective	General elective
	Semester 2	IS Strategy and Governance	General elective	Information Systems Capstone Experience	

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Software Engineering

Scan to
learn more



You'll use engineering principles to build software products. This could be developing computer games or running a communications control system. Throughout your subjects you'll build your programming skills in different programming languages and your graduate study will help you become an accredited engineer.

What should I study?

Start with an undergraduate degree with a major like Computing and Software Systems (3 years full-time), then progress to a Master of Software Engineering (2-3 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Design
- Bachelor of Science

Your career

As a software engineer, you could work in banking and finance, human-computer interaction, technology consulting, health and more.

Optional specialisations

In the Master of Software Engineering you can choose from these optional specialisations:

- Artificial Intelligence: Design, implement and analyse machines that learn, plan and reason covering topics like machine learning and digital ethics.
- Business: Study tailored subjects covering economics, marketing and finance.
- Cybersecurity: Create new technologies to improve security covering topics like cryptography and security analytics.
- Distributed Computing: Manage large quantities of data through networks and cover topics like distributed algorithms and parallel computing.
- Human-Computer Interaction: Create the next generation of interfaces with knowledge in user experience and social computing.

Sample course plan

Bachelor of Design (Computing and Software Systems major)

Year 1	Semester 1	Foundations of Computing	Calculus 1	Design elective	Foundation of Information Systems
	Semester 2	Foundations of Algorithms	Calculus 2	Design elective	Breadth subject
Year 2	Semester 1	Design of Algorithms	Elements of Data Processing Design	Design elective	Breadth subject
	Semester 2	Database Systems	Object Oriented Software Development	Design elective	Breadth subject
Year 3	Semester 1	Software Modelling and Design	Computer Systems	Design elective	Breadth/Design elective
	Semester 2	Information Technology Project	Models of Computation	Design elective	Breadth/Design elective

Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Software Engineering

Year 1	Semester 1	Software Processes and Management	Software Requirements Analysis	Interdisciplinary Design for Engineers	Modelling Complex Software Systems
	Semester 2	Security & Software Testing	Masters Software Engineering Project	Software Engineering elective	Software Engineering elective
Year 2	Semester 1	Masters advanced Project part 1	High Integrity Systems Engineering	Software Engineering elective	Approved elective
	Semester 2	Masters advanced Software Project part 2	Software Design and Architecture	Software Engineering elective	Software Engineering elective

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Computer Science

Scan to
learn more



Computer science combines technical elements from information technology, analytical skills from information systems and through graduate study, gives you the option to pursue a research career.

What should I study?

Start with an undergraduate degree with a Computing and Software Systems, (3 years full-time), then progress to a Master of Computer Science (2 years full-time). This major is available in the following undergraduate degrees:

- Bachelor of Design
- Bachelor of Science

Computer Science Research Project

Your Computer Science Research Project is an independent piece of research you can do with the support of an academic supervisor. You could work in areas like:

- Forest Crime Policing: Help protect Victoria's rare or threatened species using selective sound monitoring devices to identify the hotspots affecting animal behaviour and habitats.
- 3D object recognition in autonomous driving: Self-driving cars are becoming more accessible, and you can be a part of developing the software to help autonomous vehicles navigate adverse visibility conditions.
- Design empathetically responsive voice assistants: Technology can help people in many different ways, you can develop software programs that will make voice assistants accessible, empathetic and responsive.
- Cane toad modelling in Australia: Australia's native ecosystems are precious, and you could develop multiscale modelling to monitor invasive species like the cane toad and protect our natural environment.
- Measuring and mitigating gender bias in natural language processing: Machine learning relies on the data models that are programmed into it, and you can make sure that they're representative of the real world through monitoring data elements like gender bias, language and communication styles.

Sample course plan

Bachelor of Science (Computing and Software Systems major)

Year 1	Semester 1	Foundations of computing	Calculus 1	Science elective	Today's Science, Tomorrow's World
	Semester 2	Foundations of Algorithms	Calculus 2	Science elective	Breadth subject
Year 2	Semester 1	Design of Algorithms	Elements of Data Processing	Science elective	Breadth subject
	Semester 2	Object Oriented Software Development	Database Systems	Science elective	Breadth subject
Year 3	Semester 1	Software Modelling and Design	Computer Systems	Science elective	Breadth elective
	Semester 2	Information Technology Project	Models of Computation	Science elective	Breadth/Science elective

Core subjects Elective subjects Breadth subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Pathway to:

Master of Computer Science

Year 1	Semester 1	Introduction to Machine Learning	AI Planning for Autonomy	Declarative Programming	Computer Science elective
	Semester 2	Research Methods	Computer Science elective	Computer Science elective	Computer Science elective
Year 2	Semester 1	Computer Science Research Project Part 1		Computer Science Research Project Part 2	
	Semester 2	Computer Science Research Project Part 3		Computer Science Research Project Part 4	

Core subjects Elective subjects

These are sample course plans only. Subjects offered may change from year to year. You will be advised of current subject offerings prior to subject selection and enrolment.

Industry experiences and careers

Scan to
learn more



Connect with industry partners, research groups, start-ups and more to gain relevant experience while you study. You could complete an industry project, take on an internship or work on an innovation challenge with an industry mentor.

Some of your subjects may feature guest lecturers who will bring the latest knowledge and work from the industry to show you how you can apply what you learn in the workplace, or you could connect with an alumni mentor to help you figure out where your career could take you.

Internships

Internships provide you with opportunities to gain hands-on work experience to apply the knowledge and skills you've developed in your studies. You can complete internships during both your undergraduate study and your masters study, with options to complete internships as part of a subject for credit, or you can source them on your own.

- Undertake professional-level work experience and gain credit towards your degree.
- Take part in workshops run by qualified careers counsellors to improve your resume, develop your interview skills and build your employability for the future.
- Explore international and domestic internship opportunities related to your discipline and career goals.

As an undergraduate student, you can take engineering related internships through the Bachelor of Science work-integrated learning subjects or the Bachelor of Design vocational placements. The University also offers work opportunities through the Students@Work program where you could find a job on campus.

As a masters student, you could complete an internship as part of a subject for credit towards your degree or undertake paid work in industry outside of your studies with a not-for-credit internship. With both domestic and international internships available and the option to apply for positions with our industry contacts or find your own, an internship is the perfect opportunity to build your experience, employability and kick start your career before you graduate.

Industry projects

- Undertake a design or research project with industry and apply your knowledge to a real-world problem.
- Undertake your project over the course of a semester, full year or summer break.
- Develop a collaborative relationship with those working in industry.

Industry-connected curriculum.

- Professional IS Consulting: A practice-oriented subject in the Master of Information Systems, which helps you build working relationships with clients.
- Steel Week: Work with an industry practitioner on a structural engineering project and gain insight into engineering consulting in the Master of Civil Engineering.
- BioDesign Innovation: Collaborate with Master of Business Administration students to design a marketable medical device as part of the Master of Biomedical Engineering.

STEM Mentoring

Build professional networks, explore your career options and gain insight into the professional world of STEM with alumni mentors and industry professionals.

Other opportunities

- Industry panels and guest lectures
- Networking events
- Site visits
- Hackathons
- Health and wellbeing events
- Events and information sessions to enhance your professional skills

Experience uni while you're still at school

Scan to learn more



Eager to try out engineering or programming before you start uni? We offer a range of hands-on activities and workshops for high school students throughout the year.

Work Experience Week

Designed for: Year 10s

Want to know what it's like to be a scientist? Participate in workshops and activities in a STEM discipline of your choice. Meet new friends and role models and get a taste of university life.

go.unimelb.edu.au/t878

Girls' Programming Network

Designed for: High school girls

Take part in a series of workshops each term, developed and run by girls for girls. You will learn to program using Python and improve your software development skills.

go.unimelb.edu.au/r3fi

Hands on Engineering & Information Technology

Designed for: Year 10s

Take part in interactive, hands-on activities to learn about engineering and technology concepts and issues.

Available in school holidays and as a school excursion.

go.unimelb.edu.au/9ckj

Girl Power

**Designed for: Years 9–12
(program starts in year 9)**

Learn about careers in engineering and information technology and connect with like-minded high school students. Girl Power is a four-year program, where you'll join us for a three-day camp at the University of Melbourne, undertake work experience and participate in a mentoring program.

go.unimelb.edu.au/rg3i

Kwong Lee Dow Young Scholars Program

Designed for: Year 10s

If you're a Year 10 student studying in Victoria or the border regions of New South Wales, apply for the Kwong Lee Dow Young Scholars Program for an exciting uni experience that will push you to achieve your best. After finishing high school, you might receive an adjustment on the lowest selection rank for entry into selected Melbourne undergraduate degrees, help with costs of moving to Melbourne, and a chance to study overseas.

unimelb.edu.au/kld

University of Melbourne Extension Program

Designed for: Year 11s

Are you looking to further your academic potential? Free to join, this program gives you the opportunity to study university subjects during your final year of high school. With an extensive range of subjects to choose from, you'll expand your knowledge, meet other academically-driven students and contribute points to your ATAR.

unimelb.edu.au/extension-program

The Victorian Indigenous Engineering Winter School (VIEWS)

Designed for: Years 10–12

Indigenous students from across Australia can spend 5 days gaining an insight into what it's like to study and work in engineering, information technology and tech.

go.unimelb.edu.au/8f7s



"I joined the Girl Power 2018 cohort and have been volunteering with the program ever since. The 4-day camp brings together young women from across the state, offering hands-on experiences across a wide range of engineering and IT fields. Many of us shared the common experience of being one of the few girls in our science classes at school, so it was incredibly empowering to find a community built on our shared passion for STEM. I left the program with a strong network of friends, and it was comforting to know we'd reconnect again during O-Week."

Khushi Malhotra

Electrical Engineering Systems major
Master of Electrical Engineering



Pathways to professional careers

Scan to learn more



Flexibility and choice are at the heart of your Melbourne experience. Below are some examples of popular pathways, however these are just a small sample of the hundreds of undergraduate and graduate study combinations you can follow.

Undergraduate degree			Graduate degree			Example career
Building, infrastructure and urban planning						
Any engineering systems major	3 years	+	Master of Civil Engineering	2–3 years	→	Civil engineer
Communications and networks						
Major in Digital Infrastructure Engineering Systems, Electrical Engineering Systems or Computing and Software Systems	3 years	+	Master of Electrical Engineering	2–3 years	→	Network engineer
Data science, artificial intelligence and cybersecurity						
Major in Computing and Software Systems, Digital Infrastructure Engineering Systems, Electrical Engineering Systems or Mechatronics Engineering Systems	3 years	+	Master of Software Engineering	2–3 years	→	Software engineer
Food and the environment						
Major in Chemical Engineering Systems or Environmental Engineering Systems	3 years	+	Master of Chemical Engineering	2–3 years	→	Chemical engineer
Medicine and health						
Major in Biomedical Engineering Systems, Chemical Engineering Systems or Mechanical Engineering Systems	3 years	+	Master of Biomedical Engineering	2–3 years	→	Biomedical engineer
Processes and product design						
Major in Biomedical Engineering Systems, Chemical Engineering Systems, Mechanical Engineering Systems or Mechatronics Engineering Systems	3 years	+	Master of Industrial Engineering	2 years	→	Industrial engineer
Robotics and automation						
Major in Computing and Software Systems, Electrical Engineering Systems or Mechatronics Engineering Systems	3 years	+	Master of Information Technology	1–2 years	→	AI engineer
Sustainability						
Major in Chemical Engineering Systems, Digital Infrastructure Engineering Systems or Environmental Engineering Systems	3 years	+	Master of Environmental Engineering	2–3 years	→	Environmental engineer
Transport, disaster response or power systems						
Major in Civil Engineering Systems, Digital Infrastructure Engineering Systems, Electrical Engineering Systems or Mechanical Engineering Systems	3 years	+	Master of Digital Infrastructure Engineering	2–3 years	→	Geospatial engineer

How to apply and entry requirements

Scan to
learn more



How to apply

Domestic students

If you're an Australian or New Zealand citizen, an Australian permanent resident, or hold a permanent humanitarian visa, you're considered a domestic student. Domestic students applying for an undergraduate course must submit an application through the Victorian Tertiary Admissions Centre (VTAC). Domestic students studying overseas must also apply through VTAC.

vtac.edu.au

International students

International students studying an Australian Year 12 in Australia, an International Baccalaureate in Australia or New Zealand must apply through VTAC. University of Melbourne internal transfer must apply directly via the internal application form.

study.unimelb.edu.au/how-to-apply/youronline-application

All other international students, including those undertaking foundation studies in Australia, must apply directly to the University or through one of our official overseas representatives.

<https://go.unimelb.edu.au/ony6>

Non-school leaver entry pathway

We understand that not all students come directly from completing an Australian Year 12 qualification. The non-school leaver entry pathway provides an alternative way to demonstrate your eligibility for entry and your likelihood to succeed in your chosen course.

go.unimelb.edu.au/oxy6

Guaranteed entry

If you complete your undergraduate degree at the University of Melbourne and achieve a Weighted Average Mark (WAM) of 65%, you are guaranteed a Commonwealth Supported Place (domestic students) or an international fee place (international students), for the Master of Engineering, Master of Information Systems or Master of Information Technology, regardless of your ATAR ¹.

Commonwealth Supported Places (CSP)

Domestic students and the Australian Commonwealth Government share the cost of tuition. Student contribution is based on the subjects you enrol in, rather than the overall course.

studyassist.gov.au

Fees

Visit our website for more information on Domestic (CSP) and International student fees.

go.unimelb.edu.au/djy6

Check out the Australian Government's website for current CSP contributions.

go.unimelb.edu.au/5wep

HECS-Help

HECS-HELP is a loan scheme that allows eligible domestic students in a Commonwealth Supported Place (CSP) to defer their student contribution payments. In the HECS-HELP scheme the Australian Government pays your student contribution amount. You only repay your HECS-HELP loan once your income meets the threshold.

studyassist.gov.au



¹ Provided the maths and science entry requirements are met.
² Fees are based on Equivalent Full-Time Student Load (EFTSL):
1 EFTSL is a standard annual full-time load.

Entry requirements

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This table provides a quick summary of our undergraduate degree entry requirements and should be used as a guide only.

Qualification	Bachelor of Biomedicine	Bachelor of Design	Bachelor of Science	Bachelor of Commerce
Domestic applicants				
Graduate degree package	95.00	90.00	95.00	95.00
Lowest selection rank 2026 ^①	90.00	85.00	91.00	92.00
2027 Access Melbourne ATAR guarantee (Regional or remote; disadvantaged financial background; care leaver; refugee)	82.00	74.00	79.00	79.00
2027 Access Melbourne Indigenous ATAR guarantee (Aboriginal and Torres Strait Islander)	80.00	70.00	74.00	75.00
VCE (Units 3 and 4) prerequisite subjects ^②	A study score of at least 25 in English/English Language/Literature or at least 30 in EAL AND At least 25 in Chemistry and in Mathematical Methods or Specialist Mathematics	A study score of at least 25 in English/English Language/Literature or at least 30 in EAL If intending to pursue an engineering systems or computing major: At least 25 in Mathematical Methods; OR undertake a bridging mathematics subject as breadth in first year	A study score of at least 25 in English/English Language/Literature or at least 30 in EAL AND At least 25 in Mathematical Methods or Specialist Mathematics, and in one of Biology, Chemistry or Physics; OR At least 25 in both Mathematical Methods and Specialist Mathematics	A study score of at least 25 in English/English Language/Literature or at least 30 in EAL AND At least 25 in Mathematical Methods or Specialist Mathematics
International applicants				
International Baccalaureate (IB) Diploma	34	29	31	34
IB prerequisite subjects	English, Chemistry and Mathematics (or Further Mathematics)	English	English, Mathematics (or Further Mathematics) and one of: Biology, Chemistry or Physics; OR English, Mathematics and Further Mathematics	English and Mathematics (or Further Mathematics)
GCE A Levels/ Singapore A Levels score	AAA	BBB	BBB	BBB
A level prerequisite subjects	Chemistry, Mathematics and an approved AS Level English subject	An approved AS Level English subject	Mathematics and one of Biology, Chemistry or Physics and an approved AS Level English subject	Mathematics and an approved AS Level English subject
Trinity College Foundation Studies (TCFS) score	84	80	80	85
TCFS prerequisite subjects	EAP, English, Chemistry and Mathematics 1	EAP and English	EAP, English, Mathematics 1, and one of: Biology, Chemistry or Physics OR EAP, English and both Mathematics 1 and Mathematics 2	EAP, English, Mathematics 1 and History of Ideas
International students studying in Year 12 in Australia (ATAR) ^③	89.00	80.00	85.00	90.00

Achieve 65% average to enter the Master of Engineering. Not required for Graduate Degree Packages.

- ① The 2026 lowest selection rank is the lowest ATAR domestic school-leaver applicants were selected to in January 2026. This rank should be used as a guide only, as it is subject to change in future intakes.
- ② Available to domestic applicants only. This is the lowest selection rank that led to an offer in the last start-year intake, and a useful guide for entry standards in the next intake. Your selection rank is your ATAR plus any adjustments, for example, equity scheme adjustments based on your personal circumstances.
- ③ International students: This recognised qualification entry score is equivalent to the Victorian Certificate of Education (VCE) score and can be used as a guide to the standard required for entry to this course.

Scholarships

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We offer more than 1200 scholarships and prizes for new and current students.

Our scholarships award academic excellence and assist students from diverse backgrounds thrive at university.

There are scholarships, prizes and awards for academic achievements, overseas studies and leadership opportunities as well as bursaries to ease financial pressures so you can focus on your studies and get the most out of your time at University.

For a full list of scholarships offered by the University and our faculties, visit our dedicated website: scholarships.unimelb.edu.au.

Melbourne Chancellor's Scholarship

The Melbourne Chancellor's Scholarship is one of the University's most prestigious scholarships and is offered to recent school leavers in recognition of their outstanding academic achievement during their Australian Year 12 or International Baccalaureate (IB).

As a Chancellor's Scholar, you will enjoy generous fee exemptions and be guaranteed a place in the graduate course of your choice at Melbourne. Domestic students also receive a living allowance for up to three years.

Eligible students who apply for an undergraduate degree at the University through VTAC are automatically considered for a Melbourne Chancellor's Scholarship.

The scholarship is guaranteed to students who achieved an ATAR of at least 99.90, Indigenous students with an ATAR of at least 90.00, or students enrolling in the Bachelor of Music with an ATAR of at least 99.85 and an audition score of A+.

go.unimelb.edu.au/cuv6

Hansen Scholarship Program

The Hansen Scholarship recognises students from around Australia who have demonstrated resilience to adversity, and a commitment to supporting others.

As a Hansen Scholar, you'll be awarded fully-funded accommodation at Little Hall, a yearly living allowance of \$4200 and academic and career mentorship for the duration of your undergraduate studies. You'll join a tight-knit community of fellow Hansen Scholars, make powerful industry

connections and have access to a high-quality university education that might otherwise feel out of reach.

Applications open in Term 1 to current Year 12 students starting their undergraduate studies the following year.

go.unimelb.edu.au/wdv6

Narrm Scholarship Program

Available to eligible students from all over Australia, this scholarship program provides financial, academic, career and wellbeing support throughout your undergraduate studies. You'll be automatically considered based on your Access Melbourne circumstance eligibility.

As a Narrm Scholar you'll:

- Receive a yearly living allowance of \$6500
- Participate in a tailored enrichment program to enhance your academic skills and career readiness
- Join a like-minded and supportive community.

Additional benefits:

- Narrm Scholars who come from a regional or remote area will receive a one-off relocation allowance of \$3000 to help with moving or travel costs to Melbourne
- Accommodation allowance of \$20,000 for use at approved University student accommodation for eligible Narrm Scholars.

go.unimelb.edu.au/jsa8

Melbourne Relocation Scholarship

The Melbourne Relocation Scholarship is guaranteed to students from regional and remote areas who have applied through Access Melbourne and are not in receipt of another scholarship.

The scholarship provides a relocation allowance of \$1500 to assist with the cost of moving to Melbourne.

Melbourne International Undergraduate Scholarship

Offers fee sponsorships for high-achieving students who are enrolling in a bachelor degree and are citizens of countries where international educational opportunities are limited by financial disadvantage.

Melbourne International Excellence Scholarship

Offers 20% fee sponsorship for the highest ranked entry scores for students who are enrolling in a bachelor degree and are citizens of a country outside of Australia and New Zealand.

Melbourne Humanitarian Access Scholarship

Offers full fee sponsorship and a living allowance of \$5000 per year to talented students, the Humanitarian Access Scholarship is for those who have applied for asylum in Australia.

go.unimelb.edu.au/pgo6

Residential college scholarships

More than one third of college students receive financial assistance, with a combined \$8.3M in college scholarships and bursaries available. A scholarship may reduce the fees by between \$100–\$500 per week. A further \$1.6M is provided to students through part-time employment opportunities at their college.

colleges.unimelb.edu.au/scholarships-and-fees/

Airwallex Excellence in Technology Scholarship

Established to support exceptional second year undergraduate students majoring in Computing and Software Systems. Each scholarship is valued at \$30,000 for a period of two years.

Paterson Scholarship

This scholarship supports an undergraduate student on an engineering pathway throughout their undergraduate degree and subsequent masters degree.

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