Engineering

Study options and career opportunities

swinburne.edu.au/engineering
I want to learn about designing, building and maintaining infrastructure

Study
Civil engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Civil
Bachelor of Engineering (Honours) with a major in Civil
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Civil engineer
• Geotechnical engineer
• Water environmental engineer
• Structural engineer
• Transport planner

Or an associate degree
Associate Degree of Engineering

To become
• Engineering associate

Or a diploma
Advanced Diploma of Engineering Technology specialising in Civil

To become
• Designer or planner
• Construction supervisor
• Technical officer

I want to learn about designing and managing the construction of buildings

Study
Construction engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Construction
Bachelor of Engineering (Honours) with a major in Construction
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Asset management engineer
• Construction engineer or manager
• Project engineer or manager

Or a diploma or certificate
Advanced Diploma of Building Design (Architectural)
Diploma of Building and Construction (Building)
Certificate IV in Building and Construction (Building)

To become
• Builder
• Building designer
• Estimator
• Draftsperson
• Supervisor

I want to learn how to design buildings in which people want to live and work

Study
Architectural engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Architectural
Bachelor of Engineering (Honours) with a major in Architectural
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Design engineer
• Structural system engineer
• Architectural engineer
• Project engineer
I want to learn how things work and how to make them better

**Study**

**Mechanical engineering**

*With a degree*
- Bachelor of Engineering (Honours) (Professional) with a major in Mechanical
- Bachelor of Engineering (Honours) with a major in Mechanical
- Bachelor of Engineering Practice (Honours)
- Diploma of Engineering (UniLink) [pathway to a degree]

**To learn about**
- Design
- Structures
- Energy
- Manufacturing

**To become**
- Design engineer
- Mechanical engineer
- Production engineer
- Project engineer or manager

*Or an associate degree*
- Associate Degree of Applied Technologies
- Associate Degree of Engineering

*Or a diploma or certificate*
- Advanced Diploma of Engineering Technology specialising in Mechanical
- Certificate IV in Engineering

**To become**
- Drafting technician
- Production supervisor or planner or controller
- Sales technical officer
- Tool designer
- Certified welder
- Welding supervisor
- Technical officer

I want to learn how to improve everyday life through automation

**Study**

**Robotics and mechatronics engineering**

*With a degree*
- Bachelor of Engineering (Honours) (Professional) with a major in Robotics and Mechatronics
- Bachelor of Engineering (Honours) with a major in Robotics and Mechatronics
- Bachelor of Engineering Practice (Honours)
- Diploma of Engineering (UniLink) [pathway to a degree]

**To learn about**
- Design
- Programming
- Structures
- Electronics

**To become**
- Design engineer
- Project planner or manager
- Research and development engineer
- Robotics and mechatronics engineer

*Or an associate degree*
- Associate Degree of Applied Technologies

*Or a diploma or certificate*
- Advanced Diploma of Engineering Technology specialising in Robotics and Mechatronics

**To become**
- Production supervisor or planner or controller
- Technical officer

I want to learn how to design innovative products that can be manufactured at scale

**Study**

**Product design engineering**

*With a degree*
- Bachelor of Engineering (Honours) (Professional) with a major in Product Design
- Bachelor of Engineering (Honours) with a major in Product Design
- Bachelor of Engineering Practice (Honours)
- Diploma of Engineering (UniLink) [pathway to a degree]

**To learn about**
- Design
- Structures
- Sustainability
- Manufacturing

**To become**
- Design consultant
- Entrepreneur
- Industrial designer
- Product design engineer

*Or an associate degree*
- Associate Degree of Applied Technologies

*Or a diploma or certificate*
- Advanced Diploma of Engineering Technology

**To become**
- Drafting technician
- Production supervisor or planner or controller
- Technical officer
Launched in 2018, the revolutionary new Bachelor of Engineering Practice (Honours) is co-created by industry partners to mirror the professional workplace with project-based learning. Rather than traditional majors, students can refine their interests towards an industry sector through selection of different team projects. The four industry sectors covered are:

- Smart cities
- Internet of Things and People
- Industry 4.0
- Products designed for people.

Learn more: swinburne.edu.au/engineering-practice-honours

Study

Biomedical engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Biomedical
Bachelor of Engineering (Honours) with a major in Biomedical
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Biomedical engineer
• Clinical engineer
• Medical device designer
• Medical electronics engineer
• Medical imaging technician

I want to learn how to create devices to improve people’s health

Electrical and electronic engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Electrical and Electronic
Bachelor of Engineering (Honours) with a major in Electrical and Electronic
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Design engineer
• Power engineer
• Product designer
• Project planner or manager
• Research and development engineer

Or an associate degree
Associate Degree of Engineering

To become
• Engineering associate

Or a diploma or certificate

Advanced Diploma of Engineering Technology
- Electrical
Advanced Diploma of Electronics and Communications Engineering
Certificate III in Electronics and Communications

To become
• Planning design supervisor
• Electrical technician
• Systems technician
• Project manager

I want to learn about circuits and power generation

Telecommunications engineering

With a degree
Bachelor of Engineering (Honours) (Professional) with a major in Telecommunications
Bachelor of Engineering (Honours) with a major in Telecommunications
Bachelor of Engineering Practice (Honours)
Diploma of Engineering (UniLink) [pathway to a degree]

To learn about

To become
• Network design and security analyst
• Project manager
• Telecommunications and network product manager
• Telecommunications design engineer
• Telecommunications systems manager

I want to learn how to make information easier to transfer and use
I want to learn how to build hardware and program software to solve problems.

**Study**

**Software engineering**

**With a degree**
- Bachelor of Engineering (Honours) (Professional) with a major in Software
- Bachelor of Engineering (Honours) with a major in Software
- Bachelor of Engineering Practice (Honours)
- Diploma of Engineering (UniLink) [pathway to a degree]

**To learn about**

- Design
- Programming
- Electronics

**To become**
- Embedded systems and mobile application engineer
- Quality assurance engineer
- Software architect or engineer
- Software designer or developer
- Systems engineer

**Double degrees**

Double degrees are a great way to broaden your study experience and are highly respected by employers. They combine two areas of study and on completion you'll be awarded two degrees. A double degree is generally only one year longer than a single degree.

Consider combining your Engineering degree with a degree in another study area by studying:
- Bachelor of Engineering (Honours)/Bachelor of Business
- Bachelor of Engineering (Honours)/Bachelor of Computer Science
- Bachelor of Engineering (Honours)/Bachelor of Innovation and Design
- Bachelor of Engineering (Honours)/Bachelor of Science
- Bachelor of Laws/Bachelor of Engineering (Honours)

**Pathways to a degree**

**UniLink diplomas**

UniLink diplomas are equivalent to eight units of study (typically one year of full-time study) and can provide a pathway to the second year of a related bachelor degree. These courses are an option for students who miss direct entry to a degree or who would benefit from a more supportive style of learning.

**Vocational education**

Diplomas and certificates are vocational qualifications that provide practical teaching and skills for work. A vocational qualification could prepare you for your first job, help you retain or take the first step in a career change. Successful completion of a vocational qualification may also allow you to progress to another qualification with advanced standing.

**Scholarships**

The Vice-Chancellor's Excellence Scholarship is awarded to students in recognition of academic excellence. Recipients will receive $5000 per annum for the normal duration of their chosen degree, plus a one-off payment of $2000 towards an international study experience. They will also have the opportunity to join our High Achievers Program.

To learn more about the program visit [www.swinburne.edu.au/highachievers](http://www.swinburne.edu.au/highachievers)

Swinburne also offers scholarships to students from indigenous backgrounds, students suffering from financial hardship and students who have relocated from regional areas to study.

For a full list of scholarships, including value and eligibility criteria, visit [www.swinburne.edu.au/scholarships](http://www.swinburne.edu.au/scholarships)

**THE SWINBURNE ADVANTAGE**

At Swinburne, getting you job-ready is at the core of what we do. Our Work Integrated Learning options prepare you for the day-to-day requirements of work, helping you become a more competitive graduate. You'll build invaluable skills, career networks and, most importantly, the confidence of knowing you have what it takes to land a job in your field. This is the Swinburne Advantage.


**Professional degrees**

Professional degrees are available to students who have completed an Australian Year 12 program. These courses extend the standard degrees to include a professional placement co-major comprising a 12-month work placement. The professional placement co-major is credit-bearing and will strengthen your employability. You'll benefit from Swinburne's unique industry partnerships and be paid during your placement.

Look for degrees with (Professional) in the title.
SWINBURNE at a glance

**Shanghai Ranking’s Global Ranking of Academic Subjects, 2016**

**CIVIL ENGINEERING**
No. 75 in the world

**Academic Ranking of World Universities, 2017**

**NATURAL SCIENCES AND MATHEMATICS**
No. 200 in the world

**Times Higher Education Young University Rankings, 2018**

No. 65 in the world under 50 years old

WORLD’S MOST LIVEABLE CITY
The Economist Intelligence Unit’s Global Liveability Ranking, 2017

MELBOURNE

**WORLD’S MOST LIVEABLE CITY**

MELBOURNE

**53,000 STUDENTS**

53,000 students

**GLENFERRIE TRAIN STATION ON CAMPUS**

10 minutes by train from the city centre

HAWTHORN CAMPUS

**A$100 million ADVANCED MANUFACTURING AND DESIGN CENTRE**

A$100 million advanced manufacturing and design centre