



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Careers in Engineering



*Ashley Wiemers, Bachelor of Engineering (Honours)/
Master of Engineering (Mechanical and Aerospace) on placement at HeliMods*

What is Engineering?

Engineering is about reimagining what's possible and creating solutions that make life better, safer and more sustainable. It's a future-focused career where no two days look the same, and where creativity, critical thinking and teamwork drive progress.

From renewable energy and clean water systems to medical devices, smart cities, robotics and space technology, engineers are involved in nearly every aspect of modern life. They're designing satellites that improve communication, inventing biodegradable materials to tackle plastic waste, developing apps that connect communities, and building systems that store solar energy for a cleaner tomorrow.

And the career opportunities? They're huge. With a wide range of disciplines – like aerospace, software, civil, biomedical, robotics and environmental engineering – there's a pathway for almost every interest. Whether you want to protect the planet, explore space, or launch the next medical breakthrough, engineering gives you the tools to make it happen.

Being one of Australia's most in-demand and rewarding careers, graduates will leave UQ with high earning potential, global opportunities and the chance to work on projects that will shape the future for generations to come.



A degree that fits your ambitions

**Your interests can lead to more than a job.
They can shape the future.**

At UQ, you'll combine creativity, innovation and hands-on problem-solving to develop solutions for society's biggest challenges. You'll learn through practical projects, industry experiences and collaborative learning from your very first semester.

The table below outlines how your interests relate to relevant engineering degrees, industries and career pathways.



*Jake Warren (left), a graduate of the Bachelor of Engineering (Honours)/
Master of Engineering (Mechatronic Engineering), with Tim Mamo at CoachAir.*

Discover your options

Career path	I am interested in...	My engineering options...	Industries I could work in...	I could be a...
Advanced manufacturing Design and build the next generation of products, robotics and advanced production systems. Mechanical and Mechatronic Engineers can earn \$90,000–\$110,000+.	+ Automation + Designing machines + Improving products + Robotics + Smart factories	+ Chemical + Mechanical + Electrical + Robotic and Mechatronic	+ Advanced manufacturing + Consumer products + Food production + Pharmaceuticals + Robotics	+ Automation Engineer + Manufacturing Systems Engineer + Robotics Engineer
Digital technology and AI Develop intelligent systems, automation and AI-powered technologies. Software Engineers commonly earn \$105,000–\$125,000+.	+ Apps + AI + Coding + Cyber security + Emerging technology + Gaming	+ Computer + Software + Electrical + Robotic and Mechatronic	+ Artificial intelligence + Cybersecurity + Fintech + Gaming + Health technology + Technology	+ AI Engineer + App Developer + Cybersecurity Engineer + Software Engineer
Cities, infrastructure and transport Shape the roads, bridges, water systems and cities of the future. Civil Engineers typically earn \$95,000–\$115,000+.	+ Housing challenges + Infrastructure + Smart cities + Transport systems + Urban development	+ Civil + Environmental + Geotechnical + Structural + Transport + Water & Marine	+ Construction + Infrastructure + Transport + Urban development + Water management	+ Civil Engineer + Infrastructure Consultant + Structural Engineer + Transport Engineer
Climate and sustainability Help solve global challenges through clean technologies, sustainable infrastructure and resource management. Chemical Engineers commonly earn \$80,000–\$100,000+ early in their careers.	+ Cleaner industries + Climate action + Protecting ecosystems + Sustainability	+ Chemical + Civil + Environmental + Bioprocess	+ Environmental management + Conservation + Sustainability + Resources	+ Environmental Engineer + Sustainability Consultant + Resource Manager
Renewable energy and electrification Power Australia’s transition to a low-carbon future through renewable energy, batteries and smart grids. Electrical Engineers typically earn \$105,000–\$125,000+.	+ Batteries + Decarbonisation + Energy systems + Solar energy + Wind energy	+ Chemical + Civil + Electrical + Environmental + Mechanical + Robotic and Mechatronic + Software	+ Energy storage + Power systems + Renewable energy + Smart grids + Utilities	+ Energy Analyst + Grid Systems Engineer + Renewable Energy Engineer
Resources and mining innovation Develop the critical minerals and resources needed for renewable energy and advanced manufacturing. Mining Engineers can earn around \$152,000 within five years of graduation.	+ Automation + Critical minerals + Heavy machinery + Mining + Sustainable resources	+ Civil + Mechanical + Robotic and Mechatronic + Metallurgical + Mining	+ Automation + Critical minerals + Equipment design + Mining + Resources	+ Mine Automation Specialist + Mining Engineer + Operations Engineer
Biomedical and health technology Develop medical technologies that improve healthcare and patient outcomes. Salaries typically range from \$75,000–\$95,000.	+ Improving healthcare + Medical devices + Prosthetics + Wearable technology	+ Biomedical + Chemical + Electrical + Mechanical	+ Medical technology + Hospitals + Biotech + Diagnostics + Pharma	+ Biomedical Engineer + Health Technology Specialist + Medical Device Developer
Space, aerospace and defence Aerospace and Systems Engineers design aircraft, satellites and defence technologies. Salaries typically range from \$80,000–\$130,000.	+ Aviation technology + Drones + Rockets + Satellites + Space exploration	+ Aerospace + Electrical + Mechanical + Robotic and Mechatronic + Software	+ Aerospace + Aviation + Defence + Satellite systems + Telecommunications	+ Aerospace Engineer + Satellite Engineer + Systems Engineer

Sources: SEEK Salary Guide (2026); Engineers Australia (2025); Infrastructure Australia (2024); Australian Computer Society (2026); Clean Energy Council (2026).

Why Engineering at UQ?



Globally recognised degrees

Take your UQ engineering qualification anywhere in the world thanks to accreditation by Engineers Australia.



Future-ready skills

We don't just prepare you for your first job. We prepare you for whatever comes next. Gain skills in AI, robotics, sustainability, renewable energy and advanced manufacturing for careers shaping the next generation of engineering.



Find your perfect fit

Explore different fields in your first year before choosing your specialisation, helping you find the right fit for your interests and strengths.



Highly employable graduates

95% of UQ engineering graduates secure full-time employment, well above the national average of 87.4%.

Graduate Outcomes Survey 2022–2024



Hands-on from day one

Forget waiting until third year to get into the action. At UQ, you'll start solving real engineering challenges from your first semester.



#1 for women in engineering

More women choose UQ Engineering than any other university in Queensland.



Top educators

Learn from award-winning educators including Associate Professor Joe Gattas, recognised internationally for innovation in engineering education.



Access cutting-edge facilities

Learn in spaces like UQ Innovate, UQ's makerspace for prototyping and fabrication. Or head to UQ Ventures, where students can explore startup ideas and bring innovations to life.



Access UQ's Employability team

Build your professional skills and networks through employability workshops, career panels, work immersions, and industry experiences before you graduate.



Student-led events and competitions

Get involved in student-led teams like UQ Racing, UQ Space, and hackathons, where you'll apply your skills to real projects and compete in national and international competitions.



The future needs engineers

Engineering offers strong salaries, global opportunities and the chance to work on the technologies, infrastructure and innovations shaping the future.

19,000+ engineering jobs advertised in Australia

One of them could be yours.

Source: SEEK, 2026

Australia needs more engineers than ever before

Australia is experiencing its biggest engineering skills shortage in more than a decade.

Source: Engineers Australia, 2025

Industries shaping the future

From renewable energy and AI to healthcare and infrastructure, engineers are driving some of the world's fastest-growing industries.

- **Infrastructure and smart cities:** Major projects, including the Brisbane 2032 Olympic and Paralympic Games and Australia's \$213 billion infrastructure pipeline, are driving demand for engineers across transport, water and construction.
- **Renewable energy and sustainability:** Australia will need nearly 2 million workers in engineering and building trades to support the clean energy transition by 2050.

- **Robotics and AI:** Automation, robotics and AI are transforming industries and creating demand for engineers skilled in smart systems and emerging technologies.
- **Healthcare and biomedical engineering:** Australia's growing and ageing population is driving rapid advances in personalised medicine and healthcare solutions.
- **Mining and critical minerals:** Critical minerals are powering batteries, renewable energy technologies and advanced manufacturing, driving demand for mining, chemical and automation engineers.

Sources: Austrade (2026); Engineers Australia (2025); Mining and Automotive Skills Alliance (2025).

Big pay for big thinkers

Engineering is one of Australia's highest-paid and most in-demand careers, with strong graduate salaries and excellent long-term earning potential.



Bachelor of Engineering (Honours)

Duration: 4 years full-time

Entry requirements: QLD Year 12 (or equivalent)
English, Mathematical Methods, and one of
Chemistry or Physics

Accreditation: Engineers Australia

Dual degrees with the Bachelor of Engineering (Honours): Arts • Biotechnology • Business
Management • Commerce • Computer Science •
Design • Economics • Information Technology •
Mathematics • Science • Diploma in Languages

Bachelor of Engineering (Honours) / Master of Engineering

Duration: 5 years full-time

Entry requirements: QLD Year 12 (or equivalent)
English, Mathematical Methods, and one of
Chemistry or Physics

Accreditation: Engineers Australia

Want to know more?

Visit study.uq.edu.au



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