

# UQ Women in Engineering

## A guide for Parents and Guardians

Engineers shape our world. From space travel to life-saving medical devices, engineers work to solve the world's greatest challenges. Engineering is a career that is abundant in opportunity, creativity and innovation. This guide has been specifically developed for you, a parent or guardian, to best support your child as they consider an exciting and rewarding career in engineering.





# UQ Women in Engineering

The UQ Women in Engineering (WE) Program was established in 2013 as the first of its kind in Australia, committed to improving gender diversity in engineering.

The program is industry-funded, but university-led, with a goal to increase the number of women choosing engineering as a rewarding and impactful career.

Through the power of education, the WE program has successfully increased the number of women commencing engineering at UQ from 19.4 per cent in 2013, to 27 per cent in 2022, making The University of Queensland the university of choice for women in engineering in Queensland.

A career in engineering is rewarding, with great possibilities and career satisfaction. WE educate and inspire young women to consider a career in engineering, support them through their university experience, and ensure they are adequately prepared and enjoy a smooth transition into an exciting career in industry.

It is essential that engineering teams are diverse in order to enhance innovative solutions and creativity, and WE are proud to be working towards a more equitable balance of gender in our engineering cohort for an industry that is ready.



## How will WE support your child?

### Support from day one

Our team supports your child as they transition from high school to university life. As QTAC offers are released, WE call all successful women to congratulate them and answer their questions. Our team pride ourselves on getting to know your child and are genuinely invested in their university experience and career success. WE host engaging events throughout the year to assist in forming study groups and promoting lasting friendships.

### Student leadership roles

Engineering students are given the opportunity to join our WE student leadership team to inspire, encourage and support prospective and current female engineering students. These student leaders gain professional experience and grow in confidence by leading presentations and workshops at school visits and major events, and are also given the unique opportunity to take part in our industry mentoring program.

### Industry connections

The UQ Women in Engineering program is proudly supported by seven industry program partners who are actively involved in supporting and connecting with our cohort of female engineering students. WE host curated networking events that provide invaluable industry connections. For many of our students, these connections have led to internships and even graduate roles!

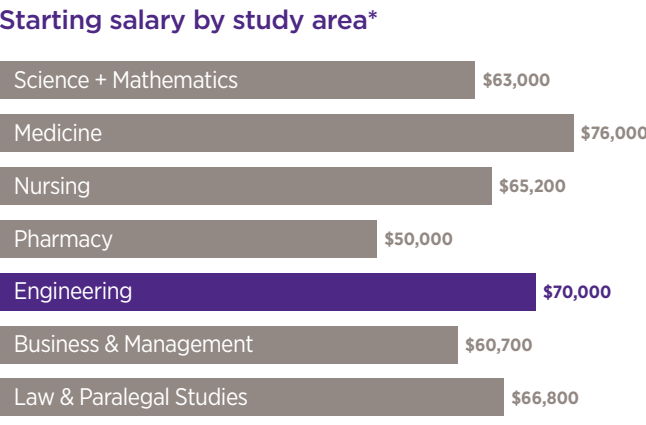


Scan the QR code to hear from a current engineering student.



# What is an engineer?

The role of an engineer is to tackle some of the world’s biggest challenges. Virtually everything around you has been touched by an engineer. There are many engineering professions, all with one consistent engineering principle: to innovate!




\* Science and Technology Australia. (2021).  
\*\* Women in STEM Decadal Plan, 2019.

**Diverse career opportunities**  
Engineering is an exciting career, with endless job prospects and pathways. Your child will have the opportunity to gain experience across a number of focus areas, roles and industries over their career. They may even choose to travel the world with their degree.

**Engineers are in high demand**  
The demand for innovative and forward-thinking engineers has never been so great. There is currently a significant skills shortage in Australia with the demand for engineers outweighing supply. STEM jobs are being created at 1.5 times the rate of non-STEM jobs.\*\*

**Make a difference**  
A career in engineering can be extremely rewarding. Engineers help to save lives and create new technology that directly improves the quality of life for others. Environmental, social and economic change present complex challenges that will need sustainable and connected solutions. Your child could be a part of changing the world as we know it.

**It pays to be an engineer**  
On top of being a fulfilling and exciting career, engineering is a stable and high-paying profession. Engineering graduates are also in the top five highest paying graduate salaries with a median salary of \$70,000.\*

 98% of UQ engineering graduates are employed  
Graduate Outcomes Survey 2019–2021



*“When I was in year 12, I was unsure what career I wanted to pursue. I loved maths and science, as well as the feeling of accomplishment when I solved a difficult problem. UQ Women in Engineering visited my school and my eyes were opened to the world of engineering and the positive impact I could have on society. The support provided by the WE program has been nothing short of spectacular. I have never looked back since choosing engineering as a career.”*

**Kathleen Cox**  
Bachelor of Engineering (Honours) (Chemical)/Master of Engineering

# Where do engineers work?

Engineers work at the forefront of innovation across established and emerging industries. Many of the world’s future jobs haven’t been invented yet. If your child has ambitions to make a difference, improve the lives of others, and change the world as we know it, engineering may be the career for them.

 34 out of 100 of the world’s top-performing CEOs have an engineering degree.  
Harvard Business Review, 2021.



**Advanced Manufacturing**  
An ever-growing industry including the manufacturing of food and beverages, natural resources, plastics and automobiles.



**Built Environment**  
Reimagining urban infrastructure, designing smart sustainable buildings or focusing on people and improving quality of life.



**Digital + Technology**  
Master the digital landscape and prepare for a career that’s thriving with creativity, innovation and opportunity.



**Energy**  
Tackle our world’s global energy challenges. Design new ways to harness and store energy for a sustainable future.



**Environment**  
Gain a deeper understanding of our planet and how to protect, manage and maintain the delicate balance of life.



**Health**  
Join the exciting world of biomedical engineering and develop materials, devices and processes that improve and save lives.



**Resources**  
Through automation and sustainable processes, build the most environmentally-friendly and productive resource sector we’ve ever seen.



**Space**  
A career in space could be anything from designing and manufacturing aircrafts, satellites and drones, to developing more efficient rockets.



# Engineering at UQ

Our engineering programs are one of the most comprehensive degrees in Australia. They will prepare your child with the skills and knowledge needed to work in both established and emerging engineering disciplines. Our industry-relevant, hands-on and dynamic programs provide a strong foundation in mathematics, science and engineering design, empowering students to meet the demands of the future.

Your child will have the confidence and creativity to meet the world's most complex challenges and engineer a better future for us all.

## Employability

UQ's dedicated Student Employability Team will work directly with your child to enhance their employability and equip them for lifelong success. Through tailored resources and support, students work to develop the skills and experience needed to stand out to future employers among the competitive graduate employment market.

## UQ Scholarships

UQ offers a range of scholarships for all study areas and levels, many of which are dedicated to encouraging and supporting women in engineering! We have one of the most generous offerings in the state, with scholarships that can help with financial support, tuition, accommodation, mentoring and industry experience.

For scholarships and application details visit [scholarships.uq.edu.au](https://scholarships.uq.edu.au)

## World-class facilities

The Engineering, Design and Computing precinct at The University of Queensland is defined by excellence. Our world-class facilities provide students with unparalleled opportunities to further their knowledge, skills and expertise in all facets of their fields. UQ teaching and learning spaces are recognised as international benchmarks for excellence and innovation.

## Global Experiences

Your child may choose to include an overseas experience as part of their program. With 120+ exchange partners in 30+ countries, semester-based exchange is an ideal way to combine study and travel. Overseas study will increase your child's employability and will likely be a highlight of their time at university.

## UQ Innovate

UQ innovate is a unique makerspace where students and staff can meet, collaborate and create in a friendly and supportive environment. Through state-of-the-art equipment, digital design and collaborative spaces, and access to modern technologies, students are able to bring their ideas and innovations to life.

## Clubs and Societies

University isn't just about hitting the books. UQ has a huge range of extra-curricular activities that relate to your child's field of study as well as their interests and hobbies such as dancing, language, sport, politics and so much more!



Find out what it's really like to study engineering at UQ. Scan the QR code.



Student and teacher working in UQ Innovate, St Lucia campus.

## Andrew N. Liveris Building

In the heart of UQ's Engineering, Design and Computing Precinct at St Lucia stands the Andrew N. Liveris Building.

At 11 storeys high, this building is the tallest building on UQ's St Lucia campus, and is home to the School of Chemical Engineering, supporting researchers and students to address global challenges in areas such as energy, water and sustainable manufacturing.

Your child will have access to world-class experimental laboratories and learning spaces, as well as fit-for-purpose equipment.





# What can your child study?

UQ offers two programs that place your child at the forefront of engineering in 2024, 2034 and beyond. Students benefit from a flexible first year with hands-on experiences across all aspects of engineering, more study options for greater career opportunities, and direct contact with industry and future employers – threaded throughout their degree.

**Bachelor of Engineering (Honours)**  
As society advances, we need engineers to solve problems and bring ideas into reality. A degree to change the world, the Bachelor of Engineering (Honours) is designed to prepare students for the jobs of the future and an exciting engineering career addressing some of the key challenges of the 21st century. Students develop technical skills through a core specialisation which will form the basis of their career as an engineer.

**Entry Requirements**  
4 years full-time (or part-time equivalent)

**Entry Requirements**  
Qld Year 12 (or equivalent) English, Mathematical Methods, and one of Chemistry or Physics

**Bachelor of Engineering (Honours)/ Master of Engineering**  
This integrated program is designed to give students the competitive edge they need to make their mark on any industry, with added specialist knowledge to propel their career as an engineer of the future. Students complete an additional full-time placement with industry or a research institution in Australia or overseas, and undertake a supervised master's thesis on a relevant topic.

**Entry Requirements**  
5 years full-time (or part-time equivalent)

**Entry Requirements**  
Qld Year 12 (or equivalent) English, Mathematical Methods, and one of Chemistry or Physics



Engineering and Technology  
Ranked 1st in Queensland

QS World University Rankings by Subject 2021









Esandi Kalugalage, Bachelor of Engineering (Honours) student and UQ Women in Engineering Student Leader

## More study options for greater career opportunities

UQ is home to the largest number of engineering study options in Queensland, with 6 core specialisations, 13 majors and 3 minors to choose from. Our broad range of majors allows your child to

further tailor their studies to match their career aspirations and deep dive into their interests, all while preparing them for the jobs of the future in new and emerging areas of engineering.

Engineering provides career flexibility. Students gain the technical expertise, confident critical thinking, and research skills to take on any role, no matter what their future holds.

Specialisations						
	 Chemical Engineering	 Civil Engineering	 Electrical Engineering	 Mechanical Engineering	 Mechatronic Engineering	 Software Engineering
Majors						
Aerospace				✓		
Biomedical	✓		✓	✓		
Bioprocess	✓					
Computer			✓		✓	✓
Environmental	✓	✓				
General Civil		✓				
Geotechnical		✓				
Materials	✓			✓		
Metallurgical	✓					
Mining		✓		✓	✓	
Structural		✓				
Transport		✓				
Water & Marine		✓				
Minors						
Computing	✓	✓	✓	✓	✓	
Data Science	✓	✓	✓	✓	✓	✓
Design	✓	✓	✓	✓	✓	✓

## A degree that fits your child's ambitions

Dual degrees allow students to pursue their interests, and broaden their employment prospects by studying two degrees at the same time, for less time.

As the world around us changes, new and fascinating career opportunities are created and job roles increasingly combine multiple disciplines. Dual degrees help

students to adapt in a changing world with the flexibility and skills to flourish in emerging markets and non-linear careers. They'll save time and money by completing two degrees at once. Our dual degrees are designed to take 5.5 years full-time for engineering, compared to 6 or 8 years for two single degrees.

Dual degrees are also highly regarded by employers and can give your child the competitive edge in the job market.

Dual Degrees available with the Bachelor of Engineering (Honours):

- Arts
- Biotechnology
- Business Management
- Commerce
- Computer Science
- Design
- Economics
- Information Technology
- Mathematics
- Science

# Common questions...

## **“I’ve never visited UQ”**

Engineering is taught at our vibrant St Lucia Campus. You'll find modern teaching and research facilities, including laboratories, lecture theatres and study spaces, along with a variety of sporting facilities, museums, cafes, and those famous Jacaranda trees. Want to see it for yourself? Book a personal tour with the WE team for you and your child. Email us at [we@eait.uq.edu.au](mailto:we@eait.uq.edu.au)

## **“Would I be a good engineer if I don’t love maths and science?”**

Maths and science are important skills for engineers, however, the chosen specialisation will determine how much is used throughout the degree. A ‘good’ engineer combines many skills including technical proficiency, creative problem solving, and the ability to communicate well.

## **“Are their scholarships available at UQ?”**

UQ offers hundreds of scholarships for students commencing university, as well as throughout their degree once they’ve chosen a specialisation. With some scholarships valued up to \$60,000, it’s worth taking the time to research what you can apply for! Visit [scholarships.uq.edu.au](http://scholarships.uq.edu.au)

## **“I don’t know what specialisation to choose”**

In your child’s first year of engineering, they will take part in UQ’s Flexible First Year. During this year, they will study foundation courses that introduce them to the way professional engineers think and work, combined with engineering practice courses involving engineering design, physical prototyping and modelling. Your child will have the opportunity to try everything, discover their passion and choose their area of specialisation based on experience.

## **“What if I don’t have the right pre-requisites?”**

If your child hasn’t completed Mathematical Methods and one of Chemistry or Physics, there are multiple pathway options available to them at UQ. Visit [study.uq.edu.au](http://study.uq.edu.au) and navigate to the ‘Consider your pathways’ page for more information.

## **“How long is an engineering degree?”**

UQ’s Bachelor of Engineering (Honours) is 4 years full-time. Students may also choose to integrate this with a Master of Engineering which adds an additional year to their study (5 years full-time study).

## **“I don’t know what I want to study, but I want to make a difference in the world”**

Engineers shape our world and innovation is at the heart of everything that they do. From space travel to renewable energy; from medical instruments to self-driving electric cars, engineers find innovative solutions to our problems, and we rely on them to provide their expertise and creativity across all industries.

## **“Are there jobs in engineering and will I be hired after graduation?”**

Our entire world has been shaped by engineers, and we need them in every industry. Australia is currently facing a significant skills shortage in engineering, which means engineers are in high demand! This is the perfect time to enter into this career path. See page 4 of this guide for more information.

## **What do I do if I didn’t get the ATAR I needed?”**

If your child didn’t receive the required ATAR, we offer a range of pathways to help them on their way. Visit [study.uq.edu.au](http://study.uq.edu.au) and navigate to the ‘Consider your pathways’ page for more information.



*“I love that with engineering, the roles and industries you can work in are endless! There are so many opportunities for career change and development which is really appealing to me. I chose engineering specifically because I’ve always had a really strong interest in the health industry and the medical applications of science.”*

### **Amorita Combis**

UQ Women in Engineering Student Leader  
Graduate Safety and Risk Engineer, Advisian, Brisbane

# Additional resources for you and your child...



**But seriously, what is ENGINEERING?**

Scan to hear directly from women studying engineering at The University of Queensland! In this video they show you around the St Lucia campus, and cover some of the exciting engineering careers and projects you could work on.



Scan for our ‘Careers in Engineering’ Booklet. This is a great resource for anyone that wants to learn more about the exciting opportunities and careers available in engineering.



Scan the QR code for our ‘But Seriously, What is Engineering?’ guide. Engineers are essential to our health, happiness and sustainability and every industry needs engineers! You could work in Film and TV, Fashion, Health, Sustainable Energy and everything in between!



Scan the QR code for our Engineering, Design, Computing, Architecture and Planning study guide. This is a comprehensive study guide that covers all specialisations and study options for 2023.

Proudly supported by our program partners:



Have a question about  
programs in this Guide?

**Faculty of Engineering,  
Architecture and  
Information Technology**

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eait.uq.edu.au



UQ Engineering and  
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UQ Engineering  
and Computing

Want to contact  
the UQ Women in  
Engineering team?

**UQ Women in Engineering**

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we@eait.uq.edu.au  
eait.uq.edu.au/we



UQWomeninEngineering



womenin\_engineering

Have a question about  
living and studying at UQ?

**Contact the Future Students  
Contact Centre**

+61 7 3346 9872  
ask@uq.edu.au  
future-students.uq.edu.au

Have a question about  
entry requirements and  
admission to UQ?

**Contact UQ Admissions**

+61 7 3365 2203  
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future-students.uq.edu.au/  
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