



the university
for the real world

SUSTAINABLE INFRASTRUCTURE

INNOVATIVE POSTGRADUATE PROGRAMS

Create a sustainable future for your career and your community

QUT is introducing innovative postgraduate programs in Smart Transport & Mobility and Water Engineering, designed to tackle complex global challenges.

As the 2030 Agenda for Sustainable Development gathers momentum, it becomes imperative to empower our existing and emerging engineering workforce with the expertise needed to conceive and engineer environmentally sound solutions for the future.

Beyond enhancing your employability, the knowledge acquired through these courses will prepare you to significantly contribute towards the following Sustainable Development Goals:



Ensuring Clean
Water & Sanitation



Advancing Industry,
Innovation & Infrastructure



Promoting Good
Health & Well-being



Fostering Sustainable
Cities & Communities



Supporting
Climate Action

DEVELOP GAME-CHANGING NEW SKILLS, KNOWLEDGE AND EXPERTISE AT QUT!

TRANSPORT AND MOBILITY SKILLS

- ✓ **Australian systems**
Develop skills in Australian transit applications, infrastructure planning, capacity analysis, quality of service analysis, advanced control, intelligent transport systems and project evaluation.
- ✓ **Micro and macro modelling**
Understand the suitability of micro and macro modelling and simulation techniques for tasks and assess their strengths and weaknesses.
- ✓ **Artificial Intelligence**
Develop skills in AI fundamentals and advanced transport data analytics for predictive modelling within industry practice.
- ✓ **Econometric modelling tools**
Utilise econometric modelling tools to analyse consumer choice behaviours and apply these in transport planning and travel behaviour analysis.
- ✓ **Safe infrastructure design**
Apply appropriate modelling tools and techniques for safe infrastructure design and evidence-based effective road safety interventions.

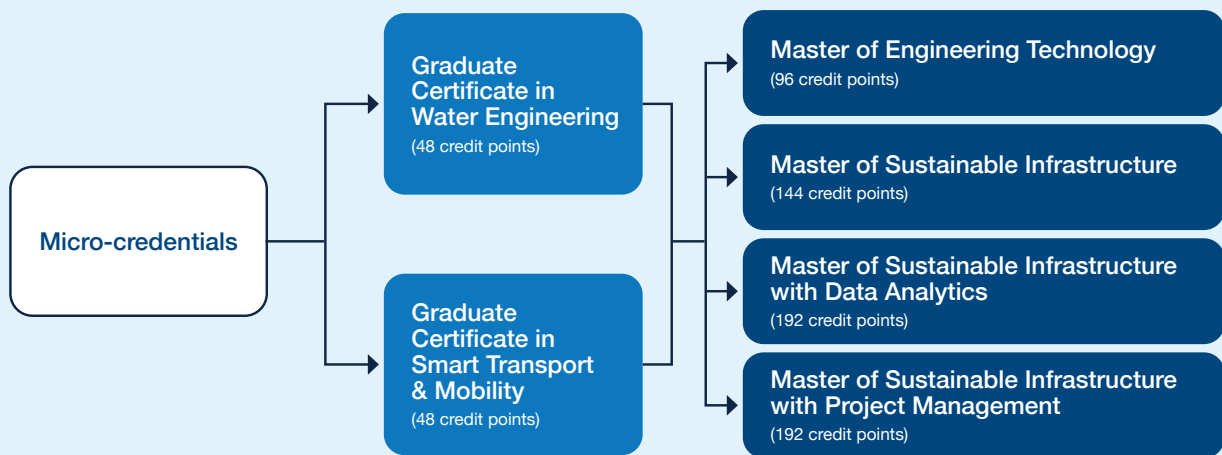
WATER ENGINEERING SKILLS

- ✓ **Integrated water solutions**
Create integrated water solutions that span over water supply, wastewater, and stormwater components of urban water systems.
- ✓ **Flood modelling**
Address complex problems related to modelling of rainfall/runoff in both non-urbanised and urbanised catchments, focusing on flood modelling
- ✓ **Water treatment solutions**
Design water treatment solutions accounting for energy and economic considerations, whilst minimising the use of chemicals.
- ✓ **Data collection and management**
Apply techniques for advanced flood and water quality data analytics that can be applied to develop predictive models for water systems in line with contemporary engineering practice.
- ✓ **Social and economic impacts**
Understand the social and economic aspects of urban water management to contribute to planning guidelines, policies and regulations.



STACK YOUR QUALIFICATIONS

Stacking qualifications allows you to develop new skills and capabilities at a pace that suits you.



Complete 6 eligible Micro-credentials and an industry project to obtain your Graduate Certificate.

Micro-credentials are designed for busy professionals who need to upskill in a particular area. Each Micro-credential carries credit points which can culminate in a Graduate Certificate, and can even contribute to a specialised master's degree later.

CAPABILITIES THAT MAKE A DIFFERENCE

QUT's postgraduate engineering courses equip students with the following capabilities:

- » Learn how to apply innovative designs to address complex sustainable infrastructure problems
- » Undertake critical analysis and evaluation of engineering activities
- » Utilise data analytics and optimisation techniques to boost the efficiency and economy of systems and processes
- » Communicate specialist discipline knowledge and concepts in written, modelled and graphical forms to technical and non-technical audiences
- » Engage in reflective practice to enhance project deliverables
- » Demonstrate culturally responsible professional engineering practice
- » Consider the ethical, environmental, social and economic outcomes for engineering activities.

LEVERAGE YOUR LEARNING

Completion of our postgraduate courses will equip you with key competencies that may be used towards an application for an Engineers Australia Chartered credential.

The Engineers Australia Chartered credential is recognised nationally and internationally as a measure of excellence and presents prospective clients with immediate confidence in your abilities.

WHY CHOOSE QUT

- » QUT offers Queensland's only Master of Sustainable Infrastructure
- » Learn from academics with significant expertise in water modelling practice and who are recognised as some of the top stormwater researchers in the world
- » Connect with experts from the QUT Future Mobility Centre to learn how to create safe, sustainable and inclusive future mobility for all
- » Commonwealth Supported Places (CSPs) are available for domestic students. This means you may not have to pay anything upfront if you're eligible for a HELP loan.

NEXT STEPS

Explore the courses on offer by visiting our website, or contact us directly to discuss your training needs