Renewable Energy

Innovative postgraduate programs



Transform energy for generations to come

QUT is introducing innovative postgraduate programs in renewable energy, with a strong emphasis on sustainability.

These courses are designed to empower engineers with the expertise needed to oversee comprehensive renewable energy projects and adeptly address both local and global challenges while upholding sustainable practices.

With a Queensland target of 80% renewable energy by 2035 (Queensland State Government, Department of Energy and Public Works) and planning already underway for a climate-positive 2032 Olympics, developing a workforce of specialists that can integrate renewable energy systems with existing electrical infrastructure will be essential for success.

Develop dynamic new skills, knowledge and expertise

Renewable power

- **Renewable electrical energy systems**
  Enhance your understanding of the structure, features and types of renewable energy systems, including grid options, DC and AC microgrids, smart grids and virtual power plants.
- **Power system modelling**
  Competence in power system modelling and an understanding of the industry-standard practices including load flow, fault calculations, protection and stability.
- **Analyse distribution networks**
  Gain expertise in addressing over-voltage issues caused by Distributed Energy Resources (DER) and implementing solutions for distribution system improvement and problem mitigation.
- **Power converters**
  Gain expertise in power converter structures, control functions and safety measures for maximising power output from renewable energy.
- **Apply systems thinking and design processes**
  Advanced skills in systems thinking and design for grid-connected renewable energy systems, integrating technical, economic, regulatory and social factors into project design and evaluation.

Renewable energy systems

- **Design, operation and maintenance**
  Expertise in designing, reliability and maintenance planning, and energy dispatch modelling for renewable energy production and storage technologies.
- **Sustainable fuels**
  Advanced knowledge of how energy carriers and sustainable fuels can add value in the renewable energy sector.
- **Decarbonisation solutions**
  Ability to develop decarbonisation solutions for existing industries, demonstrate advanced knowledge in fossil fuel replacement options and manage the intermittent availability of many current renewable energy options.
- **Project management**
  Enhance your skills in project feasibility analysis, stakeholder engagement, community consultation, social acceptance and other forms of risk from non-technical sources.
- **Energy policy and financing**
  Advanced understanding of the political and financing structures which affect renewable energy and other sustainable initiatives.

Stack your qualifications

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

Microcredentials
(6 credit points)

Graduate Certificate in Renewable Power
(48 credit points)

Graduate Certificate in Renewable Energy Systems
(48 credit points)

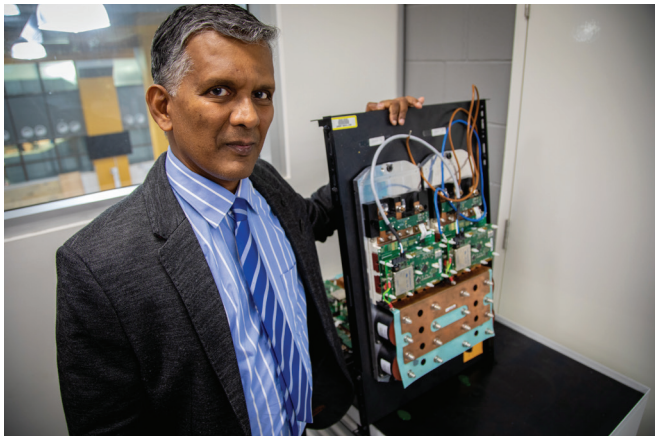
Master of Engineering Technology
(96 credit points)

Master of Renewable Energy
(144 credit points)

Master of Renewable Energy with Data Analytics
(192 credit points)

Master of Renewable Energy with Project Management
(192 credit points)





Capabilities that make a difference

The QUT postgraduate courses equip students with the following capabilities:

- Learn how to apply innovative designs to address complex renewable energy problems
- Utilise data analytics and optimisation techniques to boost the efficiency and economy of systems and processes
- Develop project design, management and research skills in engineering
- Enhanced knowledge, skills and confidence in professional presentations and demonstrations
- 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 Renewable Energy.
- 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.
- Gain access to dedicated renewable energy labs and use purpose-built software to work on real-time power simulations.
- Engage with pre-recorded lecture content at a time that suits you, whilst making the most of face-to-face opportunities to expand your professional networks.
- The Brisbane city location of the Gardens Point campus simplifies student commuting, facilitating ease of travel both before and after classes or work commitments.

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

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linkedin.com/showcase/qut-foe/

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