52859WA - Graduate Certificate in Renewable Energy Technologies

Study Online | 6 Month Program
Course Overview

The Graduate Certificate in Renewable Energy Technologies is an advanced program, presented at a considerably higher level than the advanced diploma and bachelor’s degree level programs.

This program has equal standing and level to that of a university Graduate Diploma but focuses on the career outcomes of a professional engineer and technologist. It has a higher vocational or ‘job related’ emphasis and focuses more on developing practical skills that you can apply to the workplace, rather than theory alone.

This program is designed for students who aim to build up their theoretical and practical knowledge in the field of standalone and grid-connected photovoltaic systems, hydro-electric power generation systems, and wind power plants. The course will also enhance your learning experience in energy storage systems, distributed generation systems as well as non-mainstream renewable energy technologies used for power generation.

There is a definite ongoing need for highly qualified and skilled specialists in the renewable engineering field, and this program caters to that need. This advanced program is delivered with a strong emphasis on vocational application and aims to impart practical and advanced knowledge.

It is a high-level qualification designed for those who have already attained an undergraduate degree or can demonstrate significant industry experience combined with continuing professional development. Upon completing this program, you will be able to show technical leadership in the field of renewable energy and be known as an advanced practitioner in the industry.

What You Will Gain

Specifically, graduates of the Graduate Certificate in Renewable Energy Technologies will be able to:

› Critically analyse the characteristics of solar irradiation, wind, and water as energy sources.
› Examine and investigate photovoltaic systems, wind farms and hydro-electric plants in terms of construction and operation mode, system design requirements and characteristics of turbine, generator and auxiliary equipment used for system installation and interconnection to the grid.
› Evaluate and investigate the technologies used for solar thermal electricity generation.
› Model and simulate wind power plants and carry out analysis on wind farm siting and sizing.
› Identify and outline the fundamental principles of fuel cells, biomass, biofuel, geothermal, hydrothermal, wave and tidal power, osmotic, hybrid wind-diesel, and low-energy nuclear reaction systems; compare and contrast characteristics of these systems.
› Analyse the economic impacts of renewable energy systems; address technical problems faced by electric grids with large-scale distributed generator units.

Potential Job Outcomes

Potential job outcomes could include:

› Electrical Engineer/Senior Electrical Engineer
› Environmental Engineer
› Environmental Officer
› Project Manager
› Project Coordinator
› QA/QC Manager
› Sales Engineer
› Renewable Energy Consultant
Why EIT?

We are dedicated to ensuring that you receive a world-class education and gain skills that you can immediately implement in the workforce.

Engineering Specialist
We are one of the only institutes in the world specializing in engineering.

Industry-Oriented
Our programs are designed by an international body of industry experts, ensuring you graduate with cutting-edge skills that are valued by employers around the world. Our program content will remain current with rapidly changing technology and industry developments.

Industry Experienced Lecturers
Our lecturers are highly experienced engineers with applied knowledge.

World-Class Australian Accredited Education
Like all Australian vocational education and training providers, EIT programs are accredited by the exacting standards of the Australian Government’s Australian Skills Quality Authority (ASQA). We have programs that are also recognized under international engineering accords.

Unique Delivery Model
Our unique online delivery methodology makes use of live and interactive webinars, an international pool of expert lecturers, dedicated learning support officers, and state-of-the-art technologies such as remote and virtual laboratories, and simulation software. Our supportive blended learning model and small class sizes encourage you to advance your technical knowledge and remain engaged in your studies while forming global networks and balancing life and work commitments.

Program Structure

The Graduate Certificate is an intensive part-time program, delivered over six months. The program is composed of six modules.

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Why Online?

EIT recognizes that many of our potential students have commitments which makes pursuing further study very challenging. Our online programs have been specifically designed to reduce the significant financial, time and travel commitments often required by traditional on-campus programs.

Entry Requirements

To gain entry into this program, you need to meet EIT’s entry requirements. All program entry requirements are available on the program page on our website.

Time Commitment and Duration

You are expected to spend approximately 10-15 hours per week learning the program material and completing assessments. This includes attending weekly webinars that run for about 90 minutes to facilitate class discussion and allow you to ask questions. This program is run online on a part-time basis and has been designed to fit around full-time work. It will take six months to complete.

Academic Resources

We pride ourselves on providing you with quality learning resources. All teaching materials are delivered via our learning management system, Moodle, including webinar slides, and a comprehensive reading list. We also provide access to an extensive online library and subscribe to a wide range of engineering-focused library collections, including over 160 technical engineering manuals developed and published by our sister company IDC Technologies.

Online library

Our eLibrary is hosted on our learning management system and provides free access to a vast array of resources to support your study. You will receive free online access to IDC Technologies’ technical engineering manuals, as well as the international libraries we subscribe to, namely Elsevier Knovel and the IEEE STEM 45+ collection. Collectively, these libraries contain hundreds of thousands of resources, including textbooks, journals, articles, conference papers, and other learning resources such as equations and unit converters.

Software and Hardware Requirements

› Operating system: Windows 7 or higher (Windows 10 recommended); or macOS 10.12 or higher (recommended)
› Storage: A minimum of 4GB memory (RAM), and a minimum of 20GB of spare disk space is recommended
› Processor: 1.5Ghz or higher, 2 cores or higher
› An 11” Monitor with at least 1024x768 screen resolution
› Internet access with at least 5Mbps download and upload speeds
› A valid personal email address
› Speakers and microphone/headset (can be built-in)
› A webcam that can recognize your face.
› Microsoft Office (Word, Excel, PowerPoint) or similar software
› An up-to-date web browser

Student Support

We provide you with support and encouragement from staff for the duration of your studies. You will have a dedicated Learning Support Officer, plus support from academic staff when you need it.

Our class sizes are small to allow you to build rapport with lecturers and fellow students. This will enable you to ask questions and seek clarity when needed.

We understand that personal circumstances can change while you are undertaking your studies. If at any point, you feel that you are struggling with the pace of the program or finding a particular module challenging, you can contact your designated Learning Support Officer. They will be able to either provide you with extra material, assignment extensions or put you in touch with the relevant lecturer for assistance.

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How to Apply

To apply, please visit https://www.eit.edu.au/cms/courses/electrical-engineering/graduate-certificates/52859wa-graduate-certificate-in-renewable-energy-technologies

Alternatively, you can contact your nearest EIT office by telephone; please see our website for international EIT Office contact details.