

In Progress

Please note that this Unit Profile is still in progress. The content below is subject to change.



ENEG11009 *Fundamentals of Sustainable Energy*

Term 3 - 2027

Profile information current as at 07/09/2026 09:00 pm

All details in this unit profile for ENEG11009 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

Sustainable engineering practices and climate change are critical topics in current socio-economic and political settings. Meeting the world's energy demand through renewable energy sources and exploring carbon-free alternative energy sources are the highly sought-after solutions. In this unit, you will learn how to apply fundamental laws of physics related to energy and electricity to solve engineering problems. You will also learn the concepts of voltage, and current and use Kirchhoff's laws to analyse simple direct current (DC) circuits, and learn the fundamentals of alternating currents (AC). This unit also investigates current and future sustainable energy sources comprising solar, wind, hydro, and hydrogen, and relevant production processes. This unit also explores the effects of climate change on using renewable energy and the challenges faced in integrating renewable energy into the primary grid. This unit will promote progress toward the United Nation's Sustainable Development Goal 7 - Affordable and Clean Energy.

Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

There are no requisites for this unit.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 3 - 2027

- Online

Attendance Requirements

All on-campus students are expected to attend scheduled classes - in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Website

This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Information for Class and Assessment Overview has not been released yet.
This information will be available on Monday 13 September 2027

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Academic Progression Policy and Procedure
- Student Refund and Credit Balance Policy and Procedure
- Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from SUTE

Feedback

The prescribed textbook was published in the USA and contains examples relevant to that country. The examples discussed in the unit should be related to the current cohort in Australia.

Recommendation

Some examples on the lecture slides and in the tutorial problems should be replaced with content relevant to Australia.

Feedback from SUTE

Feedback

The unit material delivered in the first five weeks was not from the prescribed textbook, but from chapters in a book on the e-reading list. These different chapters have much more content than the content covered in the lectures. Some of the solutions given in this textbook are incorrect.

Recommendation

Identify clearly the content covered in each lecture and map it to the different textbook sections, which are available as an e-book. Solutions should be presented to a selected number of problems from the e-reading book.

Feedback from SUTE

Feedback

If possible, change the textbook from copies of different chapters to a centralised textbook (for the first five weeks).

Recommendation

Ideally, a single textbook that covers most of the unit content should be recommended as the prescribed textbook. Until such a textbook is found, the students should be directed to the exact content used from the e-reading book.

Feedback from SUTE

Feedback

Some tutorial problems/quizzes could not be solved/answered if only the lecture slides or the prescribed textbook were read.

Recommendation

Students should be advised to do some background reading on the given problem/quiz and try to find the solutions. The solutions may not be directly available through the lecture slides or the prescribed textbook.

Feedback from SUTE

Feedback

Describe the assessments in more detail during the class time.

Recommendation

The Online Test and the Written Assessment should be discussed in depth during the class time.

Feedback from SUTE

Feedback

Due to technical difficulties at the beginning of the classes, some content was rushed through.

Recommendation

Try to minimise recurring technical issues.

Feedback from SUTE

Feedback

Useful feedback on assessment items was low.

Recommendation

Sufficiently in-depth feedback should be provided to each graded assessment by each of the markers in the unit.

Feedback from SUTE

Feedback

Students' expected a higher amount of learning from assessments.

Recommendation

Students should be sufficiently informed about the unit learning outcomes from each assessment.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.
This information will be available on Monday 13 September 2027

Alignment of Learning Outcomes, Assessment and Graduate Attributes

Information for Alignment of Learning Outcomes, Assessment and Graduate Attributes has not been released yet.
This information will be available on Monday 13 September 2027

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.
This information will be available on Monday 18 October 2027

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.
This unit profile has not yet been finalised.