

In Progress

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



ENEX12001 *Electrical Power and Machines*

Term 2 - 2026

Profile information current as at 22/01/2025 11:56 pm

All details in this unit profile for ENEX12001 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

In this unit, you will model basic power system components and electrical machines using simplified linear equivalent circuits. You will explain the relationship between power and energy, and calculate power and energy in power networks and electrical machines. You will apply problem-solving techniques in the analysis of balanced three-phase power circuits using per-unit methodology. You will also investigate and compare the construction and operational characteristics of direct current (DC) and alternating current (AC) electrical machines. You will explain different drive system topologies for the electrical machines. You will explain electrical machine protection and control schemes. In this unit, you must complete compulsory practical activities. Refer to the Engineering Undergraduate Course Moodle site for proposed dates.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Prerequisite: (ENEG11009 Fundamentals of Energy and Electricity or PHYS11185 Engineering Physics B) AND MATH11218 Applied Mathematics.

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 2 - 2026

- Mackay
- Mixed Mode

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 18 May 2026

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
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and 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 In class feedback

Feedback

Students expressed appreciation for the number of attempts allowed for each online quiz and found the duration of the quizzes to be appropriate.

Recommendation

In future offerings, this good practice should be continued.

Feedback from In class feedback

Feedback

Students perceive the content of this unit as overwhelming, given that it encompasses the material of two units in a single one.

Recommendation

In future offerings, the unit content should be revised so that unnecessary information is omitted while ensuring the learning outcomes of the unit are not compromised.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.

This information will be available on Monday 18 May 2026

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 18 May 2026

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 22 June 2026

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.