

In Progress

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



ENEX20001 *Embedded System Design*

Term 1 - 2027

Profile information current as at 07/09/2026 08:52 pm

All details in this unit profile for ENEX20001 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 develop the knowledge and skills required to program, interface, and control microcontroller-based embedded systems using structured programming techniques. The unit introduces the architecture and core principles of embedded systems, covering key programming elements such as data types, loops, branching statements, and functions. You will also explore advanced topics, including interrupt handling, timers, and interfacing with peripherals, analogue and digital sensors, and external devices through various communication protocols. Through hands-on laboratory exercises, you will design, prototype, and test embedded systems using commercially available microcontrollers. The unit culminates in a final project where you will design and implement a real-world embedded application. To complete the compulsory practical activities and project, you will need to purchase specific hardware components. Details of the required components and associated costs are available on the unit Moodle site. This unit supports UN Sustainable Development Goal 9: Industry, Innovation and Infrastructure by highlighting how microcontroller-based systems enable low-cost automation and innovation in small-scale industrial applications.

Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

ENEE14006 Embedded Microcontrollers is an Anti-Requisite 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 1 - 2027

- Melbourne
- Online
- Rockhampton

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 11 January 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 Self-reflection

Feedback

Students have found some assessments in this unit challenging.

Recommendation

The Unit Coordinator should review the curriculum and assessment design to ensure an appropriate workload, clear expectations, and effective sequencing of assessment tasks to support student learning.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.
This information will be available on Monday 11 January 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 11 January 2027

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.
This information will be available on Monday 15 February 2027

Academic Integrity Statement

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