

In Progress

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



# ENEX13003 *Mechanical Design Practice*

## Term 2 - 2027

Profile information current as at 15/09/2026 10:35 pm

All details in this unit profile for ENEX13003 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

This unit aims to develop extensive skills and knowledge in mechanical engineering design. You will learn mechanical design principles in a professional context, including requirements analysis, concept development, detailed design, fabrication, testing, evaluation, and reporting. You will develop skills in 2D drafting, 3D solid modelling, rendering, and producing detailed assembly drawings of mechanical components. Additionally, you will be introduced to machine elements such as gears, bearings, cams, couplings, flywheels, mechanical seals, and their applications in various engineering contexts. You will undertake a team-based design and build project, applying sustainable mechanical design principles learned in this unit using advanced manufacturing methods such as 3D printing. Lectures and workshop sessions will provide the necessary material and support for the successful completion of the project.

#### Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

Prerequisites: ENEG11005: Fundamentals of Professional Engineering, ENEG11008: Materials for Engineers, and ENEM12009: Structural Mechanics.

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 - 2027

- Mackay
- 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 17 May 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 Email and verbal conversations

##### Feedback

Several students experienced technical issues with the 3D CAD package and raised concerns about their progress on the assessment items.

##### Recommendation

As the unit has transitioned to a second-year unit, the Unit Coordinator should streamline the content and assessment items to better align with second-year expectations.

#### Feedback from Student Unit and Teaching Evaluations

##### Feedback

Some students evaluated low in Useful Learning Materials and Useful Feedback.

##### Recommendation

The unit is now offered solely to second-year students. Therefore, the changes should focus on improving its learning materials and feedback on student assessments at the second-year level.

## Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.  
This information will be available on Monday 17 May 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 17 May 2027

## Textbooks and Resources

Information for Textbooks and Resources has not been released yet.  
This information will be available on Monday 21 June 2027

## Academic Integrity Statement

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