

## In Progress

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



# **ENEM12009 *Structural Mechanics***

## **Term 1 - 2025**

Profile information current as at 21/11/2024 11:49 pm

All details in this unit profile for ENEM12009 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 study the behaviour of solid bodies under different loadings by applying basic stress analysis principles and the introductory knowledge of engineering materials. You will gain in-depth understanding of the concepts of continuum stress, strain and deflection; analyse the response of mechanical components to axial, transverse, torsional, bending and buckling loads in the linear elastic regime. You will apply the theory of generalised Hooke's law to design pressure vessels and similar thin walled structures. You will perform calculations concerned with the mechanical properties of materials and conceptually design different mechanical components and structures based on strength, stiffness and stability. You will acquire the skills and knowledge required to develop analytical techniques that are used to solve a wide range of linear stress/strain problems in engineering practice.

### 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

Pre-requisites: (MATH11160 Technology Mathematics or MATH11218 Applied Mathematics) AND (ENEG11006 Engineering Statics or ENEM12007 Statics & Dynamics) AND (ENEG11008 Materials for Engineers or ENEG12005 Material Science and Engineering).

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 - 2025

- Bundaberg
- Cairns
- Gladstone
- Mackay
- 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 13 January 2025

## 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 Student feedback

##### **Feedback**

The use of 3D printing models enhances students learning.

##### **Recommendation**

The practice should be continuing.

#### Feedback from Student feedback

##### **Feedback**

Additional weekly questions with solutions on the Moodle site can help develop students' problem-solving skills.

##### **Recommendation**

Additional chapter problems and solutions should be uploaded to the unit Moodle site.

#### Feedback from Student feedback

##### **Feedback**

The reflection aspects associated with the assignment questions need to be reconsidered.

##### **Recommendation**

Consider revising assessment for relevance with achieving graduate capabilities.

#### Feedback from Unit coordinator and CoEA reflection

##### **Feedback**

Teaching space and ITD connection and student engagement problems

##### **Recommendation**

The lecture and tutorial delivery should be improved by sorting out good teaching space before the term starts.

## Unit Learning Outcomes

**Information for Unit Learning Outcomes has not been released yet.**

This information will be available on Monday 13 January 2025

## 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 January 2025

## Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 17 February 2025

## Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.