In Progress

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

ENEX13006 *Thermofluids Theory and Applications*

Term 2 - 2025

Profile information current as at 21/11/2024 11:46 pm

All details in this unit profile for ENEX13006 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 will introduce you to the fundamentals of thermodynamics and fluid mechanics. You will start with gas laws and laws of thermodynamics for open and closed systems. You will further work on the physics of phase change processes using T-v and P-v diagrams for pure substances. This will allow you to move on to energy analysis of closed systems, and mass and energy analysis of control volumes. In this unit, you will learn how to classify fluids and determine different forces on submerged objects. You will later work on two most commonly used equations in fluid mechanics: Bernoulli and energy equations in the context of pressure, velocity, and energy conservation. This unit will allow you to work on problems related to heat transfer such as heat conduction, and forced and natural heat convection. Students enrolled in distance mode must have access to a computer, and make frequent use of the internet. 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 3*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

MATH11219 Applied Calculus AND ENEG11009 Fundamentals of Energy and Electricity AND [ENEG11006 Engineering Statics OR ENEM12007 Statics & Dynamics]
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 - 2025

- 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 19 May 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 SUTE

Feedback
The project task provided in the assessment was exciting and provided an understanding of how the different concepts are applied in the real world.

Recommendation
This practice should be continued.

Feedback from In class discussion

Feedback
The weekly quizzes provided an excellent way to support the week's study, self-check progress, and understanding.

Recommendation
This practice should be continued.

Feedback from In class discussion

Feedback
The face-to-face residential school was beneficial. It provided an in-depth understanding of topics and an opportunity to collaborate with fellow students.

Recommendation
This practice should be continued.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.
This information will be available on Monday 19 May 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 19 May 2025

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.
This information will be available on Monday 23 June 2025

Academic Integrity Statement

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