

In Progress

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



ENTA13025 *Aviation Thermofluids and Sustainable Energy*

Term 2 - 2027

Profile information current as at 07/09/2026 09:45 pm

All details in this unit profile for ENTA13025 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 develops fundamental and applied knowledge of thermofluids, energy systems, and sustainable energy technologies, with a strong emphasis on engineering analysis and professional practice. Students will examine thermofluid properties and apply engineering principles to solve problems involving fluid flow, friction losses, and the performance of fluid machinery in aviation hydraulic and lavatory systems. The unit also explores thermodynamic, heat transfer, and psychrometric processes that underpin cabin environmental control, focusing on maintaining air quality and thermal comfort in aircraft. In addition, students will analyse energy conversion cycles to evaluate the performance of combustion engines and propulsion systems used in aviation applications. Emerging and sustainable energy solutions, including sustainable aviation fuel (SAF), hydrogen, solar, and wind energy, are critically evaluated in the context of aviation decarbonisation. The unit further develops students' professional skills in teamwork, communication, and technical documentation. Students will work collaboratively to produce high-quality engineering reports using appropriate terminology, diagrams, and standard engineering symbols. Overall, the unit integrates theoretical knowledge with practical and sustainability-focused applications relevant to modern aviation engineering practice.

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

There are no requisites 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 2 - 2027

- 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 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 In-class student feedback

Feedback

Students expressed a preference for more hands-on activities to complement the unit's theoretical content.

Recommendation

It is recommended to incorporate additional practical exercises or project-based activities to enhance experiential learning and better engage students with the unit content.

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.