

In Progress

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



ENEC12010 *Hydraulics and Hydrology*

Term 1 - 2026

Profile information current as at 22/01/2025 09:06 pm

All details in this unit profile for ENEC12010 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 be introduced to the basic principles of hydraulics and hydrology used in civil and environmental engineering. You will apply the concepts of conservation of mass, momentum, and energy. You are also introduced to flow measurements, physical modeling of hydraulic systems, and pump selection to suit given applications. You will solve problems, prepare basic designs, and describe the construction and maintenance of pipes and open channel systems. You will learn about monitoring and analysis of the basic components of the hydrologic cycle. You will also use HEC-RAS or equivalent software to create a digital twin of a hydraulic system, and validate your model's output by participating in a remote design studio. In completing these tasks, you must use appropriate technical language in written communication and work individually and in teams to solve problems.

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

Prerequisite: MATH11218 Applied Mathematics or MATH11160 Technology Mathematics
Prerequisite or Corequisite: ENEG11006 Engineering Statics

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 - 2026

- Bundaberg
- Cairns
- Gladstone
- Mackay
- Mixed Mode
- 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 12 January 2026

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

Unit resources can be better organised and aligned to assessment timelines.

Recommendation

The unit weekly topic schedule should be reviewed to align the unit content better with assessment timelines.

Feedback from SUTE

Feedback

Workload in the second half of the semester was high.

Recommendation

The unit content should be reviewed to spread the workload throughout the term.

Feedback from SUTE

Feedback

Formulating answers for open-ended assessment tasks were difficult.

Recommendation

It should be clearly communicated to the students that the assessments are intentionally left open-ended to simulate real-world scenarios. Additional drop-in sessions should be organised to support unpacking the open-ended tasks.

Feedback from SUTE

Feedback

The lecturer encouraged engagement and responded promptly to queries via forum posts, emails, and individual drop-in sessions.

Recommendation

This practice should be continued.

Feedback from SUTE

Feedback

Providing progressive feedback for assessment would help student learning.

Recommendation

Additional sessions should be organised to provide progressive feedback for open-ended assessment tasks.

Feedback from SUTE

Feedback

It is difficult to understand the usefulness of unit content.

Recommendation

Relevance of the unit content for their jobs and succeeding units in the course should be emphasised during the lectures and via guest lectures as well.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.

This information will be available on Monday 12 January 2026

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 12 January 2026

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 16 February 2026

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.