

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 - 2027

Profile information current as at 04/09/2026 05:53 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 - 2027

- 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 11 January 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 SUTE

Feedback

Students expect the unit profile to be explained during lectures, with particular focus on assessments.

Recommendation

The unit profile should be discussed in greater detail during the first week of lectures, with particular attention to assessment timelines.

Feedback from SUTE

Feedback

Students find that some content may not be essential for their learning.

Recommendation

The unit learning materials should be reviewed to identify essential content and optional recommended material.

Feedback from SUTE

Feedback

Students find that the lecturer encouraged engagement and provided prompt responses to queries via forum posts, emails, and individual drop-in sessions.

Recommendation

This practice should be continued.

Feedback from SUTE

Feedback

Students expect more detailed feedback on group assignments.

Recommendation

Additional drop-in sessions should be organised to support the group assignments.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.
This information will be available on Monday 11 January 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 11 January 2027

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.
This information will be available on Monday 15 February 2027

Academic Integrity Statement

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