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

ENEC12009 *Engineering Surveying and Spatial Sciences*
Term 1 - 2027

Profile information current as at 12/11/2026 12:05 pm

All details in this unit profile for ENEC12009 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 introduces you to engineering surveying techniques and spatial sciences. It outlines the fundamental principles of the plane and geodetic surveying, such as measurements of distances, elevations, and angles. You will learn surveying methods such as triangulation and traversing and use industry-relevant software QGIS or equivalent to develop skills in mapping and visualisation. This unit also introduces you to concepts related to automated survey instruments, errors and survey adjustments, computerised processing of survey data, and a range of advanced surveying tools such as GPS, laser scanners, and drones. You will also develop teamwork and communication skills necessary to implement such systems in the civil construction and mining industries.

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.
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
- 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 would benefit from earlier access to QGIS setup guidance and practical learning resources.

Recommendation
The introductory tutorial should be held earlier in the term, and the resources will be released sooner, in line with the study schedule.

Feedback from SUTE UC's reflection

Feedback
Students would benefit from clearer assessment requirements and more transparent marking criteria.

Recommendation
More detailed assessment requirements and rubrics should be provided in future offerings to clarify performance expectations and grading criteria.

Feedback from SUTE

Feedback
Students noted that the unit structure supported their learning.

Recommendation
The current unit structure should be maintained, with ongoing refinement to ensure consistent delivery throughout the term.

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 11 January 2027

Academic Integrity Statement

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