In Progress

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

MATH12225 *Applied Computational Modelling*

Term 1 - 2025

Profile information current as at 05/09/2024 01:38 pm

General Information

Overview

Applied Computational Modelling will further your understanding of and ability in mathematical modelling of scientific and engineering problems. You will use built-in MATLAB functions to solve general problems in various disciplines. You will also learn to program in MATLAB to obtain solutions to complex problems through both analytical and numerical approaches. This unit will teach you to approach problems in a way that demonstrates a clear, logical, and systematic procedure of modelling through integrating mathematical and programming knowledge and techniques. You will also learn how to document problems and findings. Course work leads you to approach posed problems in a way that demonstrates a clear, logical, and systematic procedure of modelling through integrating mathematical and programming knowledge and techniques learnt.

Details

Career Level: *Undergraduate*
Unit Level: *Level 2*
Credit Points: *6*
Student Contribution Band: *7*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites

Pre-requisite: MATH11219
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 - 2025

- 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 13 January 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 Email, Moodle, Student Feedback

Feedback
Students felt that in certain cases, marking was too arbitrary.

Recommendation
Consider allocating project marking to the unit coordinator, and theory (coding) marking to the other marker/s with a better specification of marking criteria.

Feedback from Email, Moodle, Zoom, Student Feedback

Feedback
Students without previous coding skills experienced a steep / difficult learning curve.

Recommendation
A few weeks of coding is planned to be incorporated into the first year units from 2023. Give further weekly support to students with insufficient coding background.

Feedback from Email, Moodle, Student Feedback

Feedback
Students found the Theory Assignment and Final Online Test long and challenging.

Recommendation
Consider reducing the content/length of the coding-based assessments. Consider scaffolding sessions to help students build confidence for their assessments.

Feedback from Student Feedback

Feedback
Some students felt that more useful knowledge and skills could be learned.

Recommendation
Help students to find interesting projects in their field to model in MATLAB (Project A). Consider linking Project B to more authentic engineering problems.

Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.
This information will be available on Monday 13 January 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 13 January 2025

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 17 February 2025

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.