

## In Progress

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



# **MATH11219 *Applied Calculus***

## **Term 2 - 2025**

Profile information current as at 27/09/2024 10:11 am

All details in this unit profile for MATH11219 have been officially approved by CQUiversity 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 apply the essential calculus concepts, processes, and techniques to develop mathematical models for science and engineering problems. Throughout the term, you will record handwritten worked examples of all problems attempted in a workbook to create a comprehensive resource for solving mathematical problems, which you can apply in the exam and throughout your course and career. You will use the Fundamental Theorem of Calculus to illustrate the relationship between a function's derivative and integral. The theorem will also be applied to problems involving definite integrals. Differential calculus will be used to construct mathematical models that investigate various rate-of-change and optimisation problems. You will learn how to apply the standard rules and techniques of integration. Science and engineering disciplinary problems will be explored through the use of differential equations. Other essential elements of this unit are communicating results, concepts, and ideas using mathematics as a language. Mathematical software will also be used to visualise, analyse, validate, and solve problems studied in the unit.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 7

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

Prerequisite: MATH11218 Anti-requisite: MATH12223 or MATH12224

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 - 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 19 May 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 SUTE

##### **Feedback**

Students were not happy with the amount of questions they have to solve in workbook based assessment items.

##### **Recommendation**

A number of questions in the workbook-based assessment item should be revisited to reduce the workload by removing similar types of questions from the workbook.

#### Feedback from SUTE

##### **Feedback**

Students preferred solving smaller number of tutorial questions in detail rather than explaining large number of questions within one tutorial session.

##### **Recommendation**

Tutorial questions should be reviewed and identify the key questions to be discussed during the tutorial session in detail.

#### Feedback from SUTE

##### **Feedback**

Students found content and real-world applications used within the unit interesting.

##### **Recommendation**

This content should be retained.

#### Feedback from SUTE

##### **Feedback**

Some students found content taught in the unit not relevant to their discipline of study.

##### **Recommendation**

Content should be reviewed to include material that covers multiple disciplines.

#### Feedback from SUTE

##### **Feedback**

Students expected more detailed individualised feedback for their assessments.

##### **Recommendation**

More detailed feedback should be given to assessments.

## Unit Learning Outcomes

Information for Unit Learning Outcomes has not been released yet.

This information will be available on Monday 19 May 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 19 May 2025

## Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 23 June 2025

## Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.