



# MATH40228 *Intermediate Mathematics for* **University** Term 2 - 2024

Profile information current as at 06/12/2024 05:06 pm

All details in this unit profile for MATH40228 have been officially approved by CQU University 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

Intermediate Mathematics for University is designed to follow on from a study of introductory mathematical concepts, such as Fundamental Mathematics for University, preparing you for Technical Mathematics for University and/or undergraduate courses requiring an intermediate level of mathematics. You will complete core and elective modules, chosen according to your future study plans, including simultaneous equations; inequalities and absolute values; quadratic equations; logarithms; functions; geometry; trigonometry; variation, ratio, and proportion; sequences and series; statistics and standard deviation; probability; financial mathematics; and annuities.

### Details

Career Level: *Non-award*

Credit Points: 6

Student Contribution Band: 7

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

There are no requisites for this unit.

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 - 2024

- Bundaberg
- Online

### 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

### Recommended Student Time Commitment

Each 6-credit Non-award unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Written Assessment**

Weighting: 50%

#### 2. **Take Home Exam**

Weighting: 50%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## 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 Students

**Feedback**

Students reported that the videos are valuable for IMU. Students found them really helpful for truly understanding mathematics.

**Recommendation**

Continue to renew videos.

#### Feedback from Students

**Feedback**

Zoom lectures complement the textbook examples and learning structure.

**Recommendation**

Continue to deliver Zoom lectures and Zoom support sessions.

#### Feedback from Students

**Feedback**

The textbook content is broken up into less dense modules which makes it easy to complete.

**Recommendation**

Maintain the current structure of the modules in any further editing of the text.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Use available resources to select and apply appropriate intermediate bridging mathematics techniques to correctly solve problems
2. Adopt mathematics as a language to logically communicate solutions
3. Reflect on assessment feedback to improve mathematical comprehension
4. Implement appropriate revision techniques and strategies to improve the retention and recall of content
5. Recall, select and apply appropriate intermediate bridging mathematics procedures to correctly solve problems.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Written Assessment - 50%	•	•	•	•	
2 - Take Home Exam - 50%		•	•	•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Self Management	—		—	—	
2 - Communication	—	—			—
3 - Information Literacy	—	—	—	—	
4 - Information Technology Competence					
5 - Problem Solving	—				—
6 - Critical Thinking		—	—	—	—
7 - Cross-Cultural Competence					
8 - Ethical Practice	—				—
9 - Aboriginal and Torres Strait Islander Cultures					

### Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes								
	1	2	3	4	5	6	7	8	9
1 - Written Assessment - 50%	—	—	—		—	—		—	
2 - Take Home Exam - 50%		—			—	—		—	

## Textbooks and Resources

### Textbooks

MATH40228

#### Prescribed

#### **STEPS MATH40228 Intermediate Mathematics for University**

Edition: 9 (2024)

Authors: Sharon Cohalan

CQUniversity

Rockhamptom , QLD , Australia

ISBN: N/A

Binding: Spiral

The textbook for Intermediate Mathematics for University (MATH40228) is divided into two separate publications, "CORE Weeks 1-8" and, "CORE and STREAM Weeks 9 - 11". Both publications are available on the unit Moodle site and can be downloaded as combined PDF files or individual modules. We advise you to print your own copy of the modules or textbook. You will need a hard copy to complete activities and take notes. The textbooks cannot be purchased from the CQUniversity Bookshop. Your Access Coordinator can provide you with advice on printing options.

#### **Additional Textbook Information**

The textbook for Intermediate Mathematics for University (MATH40228) is divided into two separate publications, "CORE Weeks 1-8" and, "CORE and STREAM Weeks 9 - 11". Both publications are available on the unit Moodle site and can be downloaded as combined PDF files or individual modules. We advise you to print your own copy of the modules or textbook. You will need a hard copy to complete activities and take notes. The textbooks cannot be purchased from the CQUniversity Bookshop. Your Access Coordinator can provide you with advice on printing options.

### IT Resources

#### **You will need access to the following IT resources:**

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Computer- ability to access study materials, including instructional videos & upload assessment. Printer for printing assessment. Scanner or equivalent for uploading assessment.

## Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Hermina Conradie** Unit Coordinator

[h.conradie@cqu.edu.au](mailto:h.conradie@cqu.edu.au)

**Margaret Flanders** Unit Coordinator

[m.flanders@cqu.edu.au](mailto:m.flanders@cqu.edu.au)

## Schedule

### **Week 1 - 08 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
SYLE Systems of Linear Equations		

### **Week 2 - 15 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
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IEAB Inequalities & Absolute Values

**Week 3 - 22 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
QUAD Quadratic Equations		SYLE/IEAB Module Review Due Monday 22 July 2024 at 9AM AEST

**Week 4 - 29 Jul 2024**

Module/Topic	Chapter	Events and Submissions/Topic
QUAD Quadratic Equations LOGS Logarithms		

**Week 5 - 05 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
LOGS Logarithms		

**Break Week - 12 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic

**Week 6 - 19 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
GEOM Introductory Geometry		QUAD/LOGS Module Review Due Monday 19 August 2024 at 9AM AEST  The date and time of the Take Home Exam will be made available on the unit Moodle site, approximately six weeks before the Take Home Exam period.

**Week 7 - 26 Aug 2024**

Module/Topic	Chapter	Events and Submissions/Topic
TRIG Introductory Trigonometry		

**Week 8 - 02 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
VRAP Variation, Ratio and Proportion		

**Week 9 - 09 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
SEQR Sequences and Series		GEOM/TRIG/VRAP Module Review Due Monday 9th September 2024 9AM AEST

**Week 10 - 16 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
STSD Statistics and Standard Deviation		

**Week 11 - 23 Sep 2024**

Module/Topic	Chapter	Events and Submissions/Topic
FUNC Introduction to Functions OR FINM Financial Mathematics		

## Week 12 - 30 Sep 2024

Module/Topic	Chapter	Events and Submissions/Topic
Review		SEQR/STSD/FUNC Module Review OR SEQR/STSD/FINM Module Review Due Monday 30th September 2024 9AM AEST

## Review/Exam Week - 07 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic
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## Exam Week - 14 Oct 2024

Module/Topic	Chapter	Events and Submissions/Topic
		Take Home Exam The exact date and time of the Take Home Exam will be made available on the unit Moodle site approximately six weeks before the Take Home Exam period.

## Term Specific Information

Unit Coordinator: Herna (Hermina) Conradie  
Email: h.conradie@cqu.edu.au  
Telephone (Office): 0741507189  
Office: Bundaberg Campus, Building 1, G.13.  
If you have any individual queries, please do not hesitate to email me.

## Assessment Tasks

### 1 Module Reviews

#### Assessment Type

Written Assessment

#### Task Description

In this unit you will complete ten modules - nine CORE and one ELECTIVE - provided from the MATH40228 Moodle site. Your ELECTIVE module can be chosen according to the available streams:

- **Technical Stream** - FUNC. This stream must be completed if you are required to complete MATH40252 Technical Mathematics for University.
- **Science Stream** - FUNC.
- **Education Stream** - FINM.
- **Business Stream** - FINM.

At the conclusion of the nominated modules you must complete the appropriate corresponding Module Review (as outlined in the unit profile schedule). The Module Reviews are available from the MATH40228 Moodle site and must be submitted via Moodle for marking and feedback.

The Module Reviews are completed as assignments - no supervision is required and you may use your resources to assist you in completing them. The purpose of the Module Reviews is to allow your lecturer and yourself to monitor your progress throughout the term, providing support and preparation for the examination. You should use the Module Reviews to identify any concepts that require further review.

#### Assessment Due Date

Module reviews are due on the Monday of the week specified in the unit profile schedule.

#### Return Date to Students

Module Reviews will be returned and feedback provided, via the MATH40228 Moodle site, within one (1) week from the due date or submission date, whichever is later.

### **Weighting**

50%

### **Minimum mark or grade**

You must achieve an average of 50% across the four (4) Module Reviews.

### **Assessment Criteria**

Marks will be awarded for:

- demonstrating the use of applicable techniques and strategies as outlined in the unit resources
- providing a logical solution that appropriately answers the question
- mathematical communication
- the correct answer.

### **Referencing Style**

- [Harvard \(author-date\)](#)

### **Submission**

Online

### **Submission Instructions**

Module Reviews must be submitted via the assessment link on the MATH40228 Moodle site.

### **Learning Outcomes Assessed**

- Use available resources to select and apply appropriate intermediate bridging mathematics techniques to correctly solve problems
- Adopt mathematics as a language to logically communicate solutions
- Reflect on assessment feedback to improve mathematical comprehension
- Implement appropriate revision techniques and strategies to improve the retention and recall of content

### **Graduate Attributes**

- Self Management
- Communication
- Information Literacy
- Problem Solving
- Critical Thinking
- Ethical Practice

## **2 Take Home Exam**

### **Assessment Type**

Take Home Exam

### **Task Description**

The Take Home Exam will be made available via Moodle. It is anticipated that the exam should take approximately three hours to complete. You will be given a 12-hour timeframe to access and download the exam from the unit Moodle site, complete it and upload it back into Moodle. This 12 hour period will allow you to use more than three hours to complete the exam should you need it. The Take Home Exam covers material from all nine CORE modules AND the one Elective you choose to study within the unit. The Take Home Exam is an unsupervised assessment item and you are required to do your own work, maintaining academic integrity with all honesty.

The Take Home Exam is to be uploaded as one (1) pdf file via the ASSESSMENT link on the MATH40228 Moodle site. Late submissions are not accepted. Students attempting an approved deferred take home exam will attempt a different version of Take Home Exam on a different set date and time.

### **Assessment Due Date**

The date and time of the Take Home Exam will be made available on the unit Moodle site approximately six weeks before the Take Home Exam period.

### **Return Date to Students**

Take Home Exam marks will be made available to students via the unit Moodle site on the day grades are released for the term (Certification of Grades).



**Weighting**

50%

**Minimum mark or grade**

Minimum percentage of Take Home Examination marks required to pass the unit - 50%

**Assessment Criteria**

Marks for each question will be allocated for the following:

- using appropriate setting out
- following correct mathematical protocols
- showing all correct steps in the solution
- answering the question, where appropriate
- finding the correct answer.

**Referencing Style**

- [Harvard \(author-date\)](#)

**Submission**

Online

**Submission Instructions**

The Take Home Exam must be submitted via the assessment link on the MATH40228 Moodle site.

**Learning Outcomes Assessed**

- Adopt mathematics as a language to logically communicate solutions
- Reflect on assessment feedback to improve mathematical comprehension
- Implement appropriate revision techniques and strategies to improve the retention and recall of content
- Recall, select and apply appropriate intermediate bridging mathematics procedures to correctly solve problems.

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Ethical Practice

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?



#### Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem