



# MATH40228 *Intermediate Mathematics for University*

## Term 1 - 2018

Profile information current as at 20/05/2024 03:26 am

All details in this unit profile for MATH40228 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

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 1 - 2018

- Distance

### 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. **Examination**

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 Unit Evaluations

##### **Feedback**

The review sections in the Module Reviews helped students learn and remember the material.

##### **Recommendation**

Continue with the review sections in the Module Reviews.

#### Feedback from Unit Evaluations

##### **Feedback**

Although some students commented that the summary sheets were tedious and time consuming, many commented that they were valuable for revising for the exam.

##### **Recommendation**

Continue with the summary sheets but provide more clarity regarding what is required when completing them.

#### Feedback from Emails

##### **Feedback**

Some students struggled with studying for the exam.

##### **Recommendation**

Extensive revision sheets with full worked solutions were provided in Term 2 2017. Students found these extremely beneficial for preparing for the exam.

#### Feedback from Emails

##### **Feedback**

A few errors, including printing errors, were discovered in the textbook (overlapping text).

##### **Recommendation**

Identified errors will be corrected for the 2018 edition of the textbook. An amendments section is also provided on Moodle to keep track of any errors in the resources.

## 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 |
|---|--|--|--|--|--|

### Alignment of Assessment Tasks to Learning Outcomes

| Assessment Tasks             | Learning Outcomes |   |   |   |   |
|------------------------------|-------------------|---|---|---|---|
|                              | 1                 | 2 | 3 | 4 | 5 |
| 1 - Written Assessment - 50% | •                 | • | • | • |   |
| 2 - Examination - 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 - Examination - 50%        |                     | — |   |   | — | — |   | — |   |

## Textbooks and Resources

### Textbooks

MATH40228

#### Prescribed

#### Intermediate Mathematics for University Textbook

Edition: 6th Ed (2017)

Authors: Sharon Cohalan

CQUniversity

Rockhampton , Queensland , Australia

Binding: Spiral

#### Additional Textbook Information

All study materials for this unit are freely available on Moodle in electronic form; with the option to purchase a hard copy textbook. Hard copies can be purchased online from the CQUniversity Bookshop.

[View textbooks at the CQUniversity Bookshop](#)

### 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.
- Computer- ability to access study materials, including instructional videos & upload 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

**Antony Dekkers** Unit Coordinator

[a.dekkers@cqu.edu.au](mailto:a.dekkers@cqu.edu.au)

## Schedule

### Week 1 - 05 Mar 2018

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

### Week 2 - 12 Mar 2018

| Module/Topic                        | Chapter | Events and Submissions/Topic                               |
|-------------------------------------|---------|--|
| IEAB Inequalities & Absolute Values |         | Due Monday 12 March 2018 at 9AM AEST<br>SYLE Module Review |

### Week 3 - 19 Mar 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

QUAD Quadratic Equations

Due Monday 19 March 2018 at 9AM  
AEST  
IEAB Module Review

#### Week 4 - 26 Mar 2018

Module/Topic

Chapter

Events and Submissions/Topic

Start LOGS Logarithms (2 weeks)

Due Monday 26 March 2018 at 9AM  
AEST  
QUAD Module Review

#### Week 5 - 02 Apr 2018

Module/Topic

Chapter

Events and Submissions/Topic

Finish LOGS Logarithms

#### Vacation Week - 09 Apr 2018

Module/Topic

Chapter

Events and Submissions/Topic

Due Monday 9 April 2018 9AM AEST  
LOGS Module Review

#### Week 6 - 16 Apr 2018

Module/Topic

Chapter

Events and Submissions/Topic

FUNC Introduction to Functions

#### Week 7 - 23 Apr 2018

Module/Topic

Chapter

Events and Submissions/Topic

STSD Statistics and Standard  
Deviation

Due Monday 23 April 2018 9AM AEST  
FUNC Module Review

#### Week 8 - 30 Apr 2018

Module/Topic

Chapter

Events and Submissions/Topic

GEOM Introductory Geometry

Due Monday 30 April 2018 9AM AEST  
STSD Module Review

#### Week 9 - 07 May 2018

Module/Topic

Chapter

Events and Submissions/Topic

TRIG Introductory Trigonometry  
OR  
PROB Introduction to Probability

Due Monday 7 May 2018 9AM AEST  
GEOM Module Review

#### Week 10 - 14 May 2018

Module/Topic

Chapter

Events and Submissions/Topic

SEQR Sequences and Series  
OR  
FINM Financial Mathematics

Due Monday 14 May 2018 9AM AEST  
TRIG Module Review  
OR  
PROB Module Review

#### Week 11 - 21 May 2018

Module/Topic

Chapter

Events and Submissions/Topic

VRAP Variation, Ratio and Proportion  
OR  
ANNT Annuities

Due Monday 21 May 2018 9AM AEST  
SEQR Module Review  
OR  
FINM Module Review

#### Week 12 - 28 May 2018

Module/Topic

Chapter

Events and Submissions/Topic

Review

Due Monday 28 May 2018 9AM AEST  
VRAP Module Review  
OR  
ANNT Module Review

#### Review/Exam Week - 04 Jun 2018

| Module/Topic   | Chapter | Events and Submissions/Topic |
|--|---------|------------------------------|
| Check the examination timetable on MyCentre for the date of the exam (available approximately six weeks before the exam block). Check the Moodle site (Examination link in the Assessment block) for details on how to change your exam centre and check your timetable. |         |                              |

### Exam Week - 11 Jun 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

## Term Specific Information

Contact information for the Unit Coordinator: Antony Dekkers.

email: a.dekkers@cqu.edu.au

Telephone (Office): 0749309355

Office: Rockhampton, North, CQUniversity, Building 32, Ground Floor, Room G38.

If you have any individual queries, please do not hesitate to email me and I will get back to you within two working days.

## Assessment Tasks

### 1 Module Reviews

#### Assessment Type

Written Assessment

#### Task Description

In this unit you will complete ten modules - seven CORE and three ELECTIVE - provided from the MATH40228 Intermediate Mathematics for University Moodle site. Your ELECTIVE modules can be chosen according to four available streams:

1. **Technical Stream** - TRIG, VRAP and SEQR. This stream must be completed if you are required to complete MATH40252 Technical Mathematics for University.
2. **Science Stream** - TRIG, VRAP, SEQR
3. **Education Stream** - TRIG, FINM, VRAP
4. **Business Stream** - PROB, FINM, ANNT

At the conclusion of each module you must complete the corresponding Module Review (as outlined in the Schedule in this Unit Profile). The Module Reviews are available on 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. A more detailed version of this schedule can be found in the IMU Unit Guide located on the IMU Moodle site.

#### Return Date to Students

Feedback will be provided, via the MATH40228 Moodle site, within 7 days of the due date (unless it is submitted late).

#### Weighting

50%

#### Minimum mark or grade

You must achieve an average of 50% across the ten Module Reviews.

**Assessment Criteria**

Marks will be awarded for:

- Demonstrating appropriate revision techniques and strategies to improve the retention and recall of content;
- 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 Block 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

**Examination****Outline**

Complete an invigilated examination.

**Date**

During the examination period at a CQUniversity examination centre.

**Weighting**

50%

**Length**

180 minutes

**Minimum mark or grade**

Minimum percentage of examination marks required to pass the unit - 50%

**Exam Conditions**

Closed Book.

**Materials**

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).  
Calculator - all non-communicable calculators, including scientific, programmable and graphics calculators are authorised



## 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