



# Mathematical Studies

## What is Mathematical Studies?

The aim of Mathematical Studies is to give students the tools to explore, describe, and explain aspects of the world around them in a mathematical way. The subject focuses on the mathematics needed for this exploration. This mathematics can empower students to describe their world, and changes in it. As a result, students appreciate the role that mathematics can play in effective decision-making.

Mathematical Studies is designed for students who need extra consolidation of algebra skills to help them progress towards entry into Stage 2 Mathematical Studies.

Students must be enrolled in Mathematics Core to take this subject.

## Why study Mathematical Studies?

Mathematics enables students to identify, describe, and investigate the patterns and challenges of everyday living.

It helps students to analyse and understand the events that have occurred and to predict and prepare for events to come so they can more fully understand the world and be knowledgeable participants in it.

Mathematical Studies places mathematics in relevant contexts, dealing with relevant phenomena from the students' common experiences as well as from scientific, professional, and social contexts.

## Course content of Mathematical Studies

Students study three topics:

- Topic 1: Co-ordinate Geometry
- Topic 2: Quadratic
- Topic 3: Polynomials

## Assessment Components

Assessment in Mathematical Studies is conducted in Semester 1 and consists of the following components for SACE, weighted as shown:

- |                     |          |
|---------------------|----------|
| • Two folio tasks   | 20% each |
| • Three topic tests | 20% each |

Students must also complete a semester examination on all of the content covered throughout the semester. This examination is included in the Trinity Grade where each task is weighted equally.

# Mathematical Studies continued

## Learning Outcomes of the Course

At the end of the program in Stage 1 Mathematical Studies, students should be able to:

- understand mathematical concepts and relationships, making use of electronic technology where appropriate to aid and enhance understanding
- identify, collect, and organise mathematical information relevant to investigating and solving problems taken from social, scientific, economic, or historical contexts
- recognise and apply the mathematical techniques needed when analysing and solving a problem in context
- interpret results, draw conclusions, and reflect on the reasonableness of these in the context of a problem
- communicate mathematical reasoning and ideas by using appropriate language and representations
- work both independently and cooperatively in planning, organising, and carrying out mathematical activities.

## Future Pathways in Mathematical Studies

- Architecture
- Economics
- Finance
- Biological Science
- Environmental Science
- Geological Science
- Agricultural Science

## Required Texts for Mathematical Studies

- Mathematics for Yr 11: Functions, Statistics and Chance, with CD (6th edition), Haese
- Mathematics for Yr 11: Geometry and Trigonometry, with CD (5th edition), Haese
- Calculator: Casio Graphic FX-9860GAU PLUS

## What are the prerequisites?

- B promotion grade in Year 10 Core Mathematics.
- C promotion grade in Year 10 Extension Mathematics.



TRINITY COLLEGE  
Senior

## Contact Details

For more information about studying Year 11 at Trinity College Senior, please contact the Head of Year 11 on 8523 8705 or visit: [www.trinity.sa.edu.au/curriculum/index.htm](http://www.trinity.sa.edu.au/curriculum/index.htm)

## Further Information

More information about SACE may be obtained from the SACE Board of South Australia webpage at: [www.sace.sa.edu.au](http://www.sace.sa.edu.au)