



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.

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: Statistics
- Topic 2: Functions and Graphs Using Calculus
- Topic 3: Linear Equations and Matrices

Assessment Components

Assessment in Mathematical Studies consists of the following components, weighted as shown:

School Based Component: 70%

- Topic tests 45%
- Folio Tasks 25%

Externally Moderated Component: 30%

- External Examination

Learning Outcomes of the Course

At the end of the program in Stage 2 Mathematical Studies, students should be able to:

- understand fundamental mathematical concepts, demonstrate mathematical skills, and apply routine mathematical procedures
- use mathematics as a tool to analyse data and other information elicited from the study of situations taken from social, scientific, economic, or historical contexts
- think mathematically by posing questions, making and testing conjectures, and looking for reasons that explain the results
- make informed and critical use of electronic technology to provide numerical results and graphical representations
- communicate mathematically and present mathematical information in a variety of ways
- work both individually and cooperatively in planning, organising, and carrying out mathematical activities.

Mathematical Studies continued

Future Pathways in Mathematical Studies

- Architecture
- Finance
- Economics
- Biological, Environmental, Geological, and Agricultural science

If studied in conjunction with Specialist Mathematics, it will provide students with pathways into courses such as:

- Mathematical Sciences
- Engineering
- Computer Science
- Physical Sciences
- Surveying

Required Texts for Mathematical Studies

- Mathematics For Yr 12: Math Studies, with CD (2nd edition), Haese
- Mathematical Studies Revision Guide (current edition)
- Mathematics For Yr 12: Math Studies Skills & Concepts, Haese
- Calculator: Casio Graphic FX-9860GAU PLUS

What are the prerequisites?

- B promotion grade in Year 11 Mathematical Studies.
- C promotion grade in Year 11 Specialist Mathematics.



TRINITY COLLEGE
Senior

Contact Details

For more information about studying Year 12 at Trinity College Senior, please contact the Head of Year 12 on 8523 8705 or visit: 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