



# Mathematical Pathways

## What is Mathematical Pathways?

Mathematical Pathways is a two semester subject designed to give students access to, and experience of, a wide range of mathematical models and techniques used for solving problems in many contexts of human endeavour. These contexts range from enterprise and business to recreation, research, and the needs of the individual or the community.

Mathematical Pathways prepares students for trade entrance tests.

## Why study Mathematical Pathways?

This subject enables students to appreciate, experience, and understand mathematics as a growing body of knowledge in contemporary situations. It gives relevance and meaning to their world and the world of enterprise. Students who want to learn mathematics with an emphasis on practical applications should study this subject.

## Course content of Mathematical Pathways

Students study four topics taken from the list below:

- Topic 1: Applied Geometry
- Topic 2: Investment and Loans
- Topic 3: Mathematics and Small Business
- Topic 4: Matrices
- Topic 5: Optimisation
- Topic 6: Probability and Simulation
- Topic 7: Share Investments
- Topic 8: Statistics and Working with Data

## Assessment Components

Assessment in Mathematical Pathways consists of the following components each semester, weighted as shown:

School Based Component: 70%

- Two Topic Tests 45%
- Folio task 25%

Externally Moderated Component: 30%

- External Investigation (1.5 hours)

## Learning Requirements of the Course

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

- demonstrate an understanding of mathematical concepts and relationships
- identify, collect, and organise mathematical information relevant to investigating and solving problems
- recognise and apply the mathematical techniques needed when analysing and solving a problem in context
- make informed use of electronic technology to aid and enhance understanding
- interpret results, draw conclusions, and reflect on the reasonableness of these in the context of a problem
- communicate mathematical reasoning and ideas, using appropriate language and representations.

# Mathematical Pathways continued

## Future Pathways in Mathematical Pathways

- Building and Construction
- Aquaculture
- Agriculture
- Retail
- Office Management
- Visual Arts
- Engineering Trades
- Small Business
- Tourism and Hospitality
- Nursing and Paramedical Areas

## Required Texts for Mathematical Applications

- Mathematics For Yr 12: Math Applications, with CD (2nd edition), Haese
- Mathematical Applications Revision Guide (current edition).

## What are the prerequisites?

- No set requirements, consultation with the subject Head is required



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](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)