



Mathematical Applications

What is Mathematical Applications?

Mathematical Applications is 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.

Why study Mathematical Applications?

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 Applications

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 Applications consists of the following components each semester, weighted as shown:

School Based Component: 70%

- Three Topic Tests 30%
- Two Folio tasks 40%

Externally Moderated Component: 30%

- Examination 30%

Learning Requirements of the Course

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

- understand mathematical concepts and relationships
- 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
- make informed use of electronic technology to provide numerical results and graphical representations
- 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
- work both independently and cooperatively in planning, organising, and carrying out mathematical activities.

Mathematical Applications continued

Future Pathways in Mathematical Applications

- 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).
- Calculator: Casio Graphic FX-9860GAU PLUS

What are the prerequisites?

- C promotion grade in Year 11 Mathematical Studies, Specialist, or Methods
- B promotion grade in Year 11 Mathematical Applications.



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