



Aims

Core Mathematics introduces students to fundamental notions of calculus and linear algebra and their applications. It is a complete course that offers a toolkit of mathematical skills and knowledge to students entering engineering, computer science or the sciences, and introduces notions explored further in the first year courses Mathematics 1A-1B and Mathematics 1MA-1MB offered by the School of Mathematical Sciences at the University of Adelaide.

Learning outcomes

On completing this course, students will be able to:

- > Understand basic ideas of function, equivalent expressions and equations
- > Analyse functions and their graphs as informed by limits and derivatives
- > Compute limits, derivatives, definite and indefinite integrals
- > Apply the fundamental theorem of calculus
- > Solve systems of linear equations by use of the matrix
- > Understand the uses of mathematics in coding and cryptography.

Required materials

- > Course booklet supplied by The University of Adelaide College
- > Graphics calculator

Course content

The following topics will be covered:

- > Functions
- > Calculus
- > Linear algebra

Further details of the course content will be advised in the first week of classes

Contact hours

4 hours per week



Assessment

Indicative weightings for each assessment item are outlined below

Assessment	Weighting
Assignments	6%
Trial Examination 1	12%
Trial Examination 2	12%
Final Examination	70%