

YEAR 10 CORE: GENERAL MATHEMATICS

General Mathematics is intended to provide for students with diverse needs and aspirations and is intended to be widely accessible. It is intended to provide preparation for VCE General Mathematics and employment and further study in a variety of different fields, such as commerce, business, logistics and design.

Students will require an approved CAS calculator as prescribed on the booklist.

SEMESTER 1

Students will solve problems involving the area of triangles and quadrilaterals and the surface area and volume of prisms, cylinders, and related composite solids. The application of Pythagoras' theorem and trigonometry to solving in right-angled triangles will be explored. Students will solve problems involving linear equations, including those derived from formulas with and without the use of digital and CAS technology, including problems involving gradients of parallel and perpendicular lines. They will represent linear functions numerically, graphically and algebraically, use them to model situations, and solve problems. Student will apply arithmetic recurrence relations to financial arithmetic problems, including investments, loans and depreciation.

AREA OF STUDY

- Modelling and Relationships
- Linear Relationships
- Measurement

SEMESTER 2

Univariate and bivariate data will be discussed as students compare data sets by referring to summary statistics and describe the distribution in terms of shape, centre and spread. Students will use the CAS calculator to analyse real data sets from a range of local and global sources. Students will be introduced to matrices, perform matrix arithmetic as well as discuss applications of matrices. Matrices will also be investigated as a tool for storing, encoding and decoding information. Students will be introduced to the fundamentals of graph theory and network related mathematics, including an exploration of minimum spanning tree and shortest path algorithms.

AREA OF STUDY

- Recursion and finance
- Matrices
- Networks