

# General Mathematics

## Units 1-2

General Mathematics provides for different combinations of student interests and preparation for study of VCE General Mathematics at the Unit 3 and 4 level. This subject is best suited for students interested in exploring new ideas in the fields of data analysis, networks and decision making, matrices and financial modelling. This subject provides a pathway for students that require a non-specific mathematics as entry for future study and career paths such as nursing and early education.

**Students in this course must have an approved CAS calculator.**

### UNIT 1

Students will study Computation and Practical Arithmetic, Investigating and Comparing Data Distributions, Linear Relations and Equations, Linear Graphs and Modelling, Matrices, and Networks.

#### LEARNING ACTIVITIES

Explicit instruction of theory and use of technology, textbook exercises, problem-solving and modelling, application of skills to real-world problems.

#### KEY SKILLS REQUIRED

Mathematical skills and understanding, graphing calculator technology, application of mathematical skills and knowledge.

#### ASSESSED TASKS

Formative tasks for each topic, summative School Assessed Coursework (SAC) for each topic.

### UNIT 2

Students will study Investigating relationships between two numerical variables, Number Patterns & Recursion, Shape and Measurement, Applications of Trigonometry.

#### LEARNING ACTIVITIES

Explicit instruction of theory and use of technology, textbook exercises, problem-solving and modelling, application of skills to real-world problems.

#### KEY SKILLS REQUIRED

Mathematical skills and understanding, graphing calculator technology, application of mathematical skills and knowledge.

#### ASSESSED TASKS

Formative tasks for each topic, summative SAC for each topic, and an end of year written examination.

# General Mathematics

## Units 3-4

General Mathematics provides for different combinations of student interests and preparation for study of VCE General Mathematics at the Unit 3 and 4 level. This subject is best suited for students interested in exploring new ideas in the fields of data analysis, networks and decision making, matrices and financial modelling. This subject provides a pathway for students that require a non-specific mathematics as entry for future study and career paths such as nursing and early education.

**Students in this course must have an approved CAS calculator.**

### UNIT 3

In this unit students will study Data Analysis including describing and summarising data, investigate associations between variables, data transformations and modelling time series. Students will also study Recursion and Financial Modelling including modelling growth and decay using recursion and modelling and analysing reducing balance loans and annuities. Students use CAS calculators to explore skills and concepts.

#### LEARNING ACTIVITIES

Explicit instruction of theory and use of technology, textbook exercises, problem-solving and modelling, application of skills to real-world problems.

#### KEY SKILLS REQUIRED

Mathematical skills and understanding, graphing calculator technology, application of mathematical skills and knowledge.

#### ASSESSED TASKS

Formative assessment of understanding for each chapter, application SAC task for Data analysis, and problem-solving task for recursions and financial mathematics.

### UNIT 4

In this unit students will study a module on Networks and Decision Mathematics including the use of networks to model and solve problems involving connection, flow, allocation and scheduling and a module on Matrices. Students use CAS calculators to explore skills and concepts.

#### LEARNING ACTIVITIES

Explicit instruction of theory and use of technology, textbook exercises, problem-solving and modelling, application of skills to real-world problems.

#### KEY SKILLS REQUIRED

Mathematical skills and understanding, graphing calculator technology, application of mathematical skills and knowledge.

#### ASSESSED TASKS

Formative assessment of understanding for each chapter, separate problem-solving tasks for each of the two modules.

**VCAA ASSESSMENT** – The overall Study Score will consist of:

School Assessed Coursework (40%)

Examination 1 in November (30%) - 90 minutes, multiple choice questions

Examination 2 in November (30%) - 90 minutes, short answers questions