

General Mathematics

General senior subject

General

Recommendation

A Sound Achievement (C) in Year 10 Mathematics.

Rationale

General Mathematics' major domains are Number and algebra, Measurement and geometry, Statistics, and Networks and matrices, building on the content of the P–10 Australian Curriculum.

General Mathematics is designed for students who want to extend their mathematical skills beyond Year 10 but whose future studies or employment pathways do not require calculus.

Students build on and develop key mathematical ideas, including rates and percentages, concepts from financial mathematics, linear and non-linear expressions, sequences, the use of matrices and networks to model and solve authentic problems, the use of trigonometry to find solutions to practical problems, and the exploration of real-world phenomena in statistics.

Students engage in a practical approach that equips learners for their needs as future citizens. They learn to ask appropriate questions, map out pathways, reason about complex solutions, set up models and communicate in different forms. They experience the relevance of mathematics to their daily lives, communities and cultural backgrounds. They develop the ability to understand, analyse and take action regarding social issues in their world.

Pathways

A course of study in General Mathematics can establish a basis for further education and employment in the fields of business, commerce, education, finance, IT, social science and the arts.

Objectives

By the conclusion of the course of study, students will:

- select, recall and use facts, rules, definitions and procedures drawn from Number and algebra, measurement and geometry, Statistics, and Networks and matrices
- comprehend mathematical concepts and techniques drawn from Number and algebra, Measurement and geometry, Statistics, and Networks and matrices
- communicate using mathematical, statistical and everyday language and conventions
- evaluate the reasonableness of solutions
- justify procedures and decisions by explaining mathematical reasoning
- solve problems by applying mathematical concepts and techniques drawn from Number and algebra, measurement and geometry, Statistics, and Networks and matrices.

Delivery (mode, time requirements, lessons)

Students are expected to undertake independent study to complete tasks and assessment in accordance with the Work Rate Calendar. Students also have access to a one-hour scheduled lesson and a one-hour tutorial each week. Course materials can be accessed in the learning management system.

Student requirements

- Computer, access to email, scanner and internet, telephone and USB headset with microphone, exercise book, a protractor and a drawing compass.
- Scientific Calculator (preferably Casio)
- Parallel rule optional.

Structure

Unit 1	Unit 2	Unit 3	Unit 4
Money, measurement and relations <ul style="list-style-type: none"> • Topic 1: Consumer arithmetic • Topic 2: Shape and measurement • Topic 3: Linear equations and their graphs 	Applied trigonometry, algebra, matrices and univariate data <ul style="list-style-type: none"> • Topic 1: Applications of trigonometry • Topic 2: Algebra and matrices • Topic 3: Univariate data analysis 	Bivariate data, sequences and change, and Earth geometry <ul style="list-style-type: none"> • Topic 1: Bivariate data analysis • Topic 2: Time series analysis • Topic 3: Growth and decay in sequences • Topic 4: Earth geometry and time zones 	Investing and networking <ul style="list-style-type: none"> • Topic 1: Loans, investments and annuities • Topic 2: Graphs and networks • Topic 3: Networks and decision mathematics

Assessment

Formative assessment

Unit 1		Unit 2	
Examination		Examination	
Problem Solving and Modelling Task		Examination	
An average of C or higher for both pieces of assessment for QCE credit	1 credit	An average of C or higher for both pieces of assessment for QCE credit	1 credit

Summative assessment

Unit 3		Unit 4	
Summative internal assessment 1 (IA1): Problem-solving and modelling task	20%	Summative internal assessment 3 (IA3): Examination	15%
Summative internal assessment 2 (IA2): Examination	15%		
Summative external assessment (EA): 50% Examination			

In Units 3 and 4 students complete four summative assessments. The results from each of the assessments are added together to provide a subject score out of 100. Students will also receive an overall subject result (A–E).

Disclaimer All of the above information is accurate at the time of publication