

General Mathematics

General senior subject – MAG (possible 4 QCE Credits)



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.

Structure

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

Assessment

In Units 1 and 2 students will complete formative assessment items including a problem-solving and modelling task and examinations.

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).

Summative assessments

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			

Additional Requirements

Study Requirements	Special Requirements
Being a General subject a significant commitment of time and energy to complete the course successfully is required. This includes: <ul style="list-style-type: none"> • Three lesson per week face to face teaching • Regular study at least 3 times each week for a minimum of 1 hour per session, possibly in study groups • Significant increase in work load when preparing for assessments. 	<ul style="list-style-type: none"> • A scientific calculator (Casio fx82 AU PLUS II), 30cm ruler