

## Course: **MATHEMATICS STANDARD**

2 Units for each of Preliminary and HSC Board Developed Course



The Mathematics Standard course allows students to access

**EITHER** Mathematics Standard 2 course **OR** Mathematics Standard 1 course in their HSC year.

**Prerequisites:** The Mathematics Standard course has been constructed on the assumption that students have studied the content and successfully achieved the outcomes of the Mathematics Years 7–10 Syllabus up to, and including, the content and outcomes of Stage 5.1.

### Course Description:

The Mathematics Standard courses are focused on enabling students to use mathematics effectively, efficiently and critically to make informed decisions in their daily lives. They provide students with the opportunities to develop an understanding of, and competence in, further aspects of mathematics through a large variety of real-world applications for a range of concurrent HSC subjects.

Mathematics Standard 1 is designed to help students improve their numeracy by building their confidence and success in making mathematics meaningful. Numeracy is more than being able to operate with numbers. It requires mathematical knowledge and understanding, mathematical problem-solving skills and literacy skills, as well as positive attitudes. When students become numerate they are able to manage a situation or solve a problem in real contexts, such as everyday life, work or further learning. This course offers students the opportunity to prepare for post-school options of employment or further training.

Mathematics Standard 2 is designed for those students who want to extend their mathematical skills beyond Stage 5 but are not seeking the in-depth knowledge of higher mathematics that the study of calculus would provide. This course offers students the opportunity to prepare for a wide range of educational and employment aspirations, including continuing their studies at a tertiary level.

### Main Topics Covered:

	Topics	Subtopics
<b>Mathematics Standard</b>  <b>Year 11 course</b>	Algebra	Formulae and Equations Linear Relationships
	Measurement	Applications of Measurement Working with Time
	Financial Mathematics	Money Matters
	Statistical Analysis	Data Analysis Relative Frequency and Probability

	Topics	Subtopics
<b>Mathematics Standard 1</b>  <b>Year 12 course</b>	Algebra	Types of Relationships
	Measurement	Right-angled Triangles Rates Scale Drawings
	Financial Mathematics	Investment Depreciation and Loans
	Statistical Analysis	Further Statistical Analysis
	Networks	Networks and Paths

	Topics	Subtopics
<b>Mathematics Standard 2</b>  <b>Year 12 course</b>	Algebra	Types of Relationships
	Measurement	Non-right-angled Trigonometry Rates and Ratios
	Financial Mathematics	Investments and Loans Annuities
	Statistical Analysis	Bivariate Data Analysis The Normal Distribution
	Networks	Network Concepts Critical Path Analysis