



# Evans High School

## Mathematics extension one

### What is this course about?

The content of this course, which includes the whole of the two unit course, and its depth of treatment, indicate that it is intended for students who have demonstrated a mastery of the skills of Stage 5 Mathematics and who are interested in the study of further skills and ideas in mathematics.

The course is intended to give these students a thorough competence in aspects of mathematics including many which are applicable to the real world. It has general educational merit and is also useful for concurrent studies of science, industrial arts and commerce.

The course is a recommended minimum basis for further studies in mathematics as a major discipline at a tertiary level and for the study of mathematics in support of the physical and engineering sciences.

*Note: There is a \$two0.00 contribution fee for students choosing this course.*

### What will be studied?

#### Preliminary Course

- Topic: Functions
- Further Work with Functions
- Polynomials
- Topic: Trigonometric Functions
- Inverse Trigonometric Functions
- Further Trigonometric Identities
- Topic: Calculus
- Rates of Change
- Topic: Combinatorics
- Working with Combinatorics

## **HSC Course**

- Topic: Proof
- Proof by Mathematical Induction
- Topic: Vectors
- Introduction to Vectors
- Topic: Trigonometric Functions
- Trigonometric Equations
- Topic: Calculus
- Further Calculus Skills
- Applications of Calculus
- Topic: Statistical Analysis
- The Binomial Distribution

### **What do students need to do to get the Higher School Certificate in this course?**

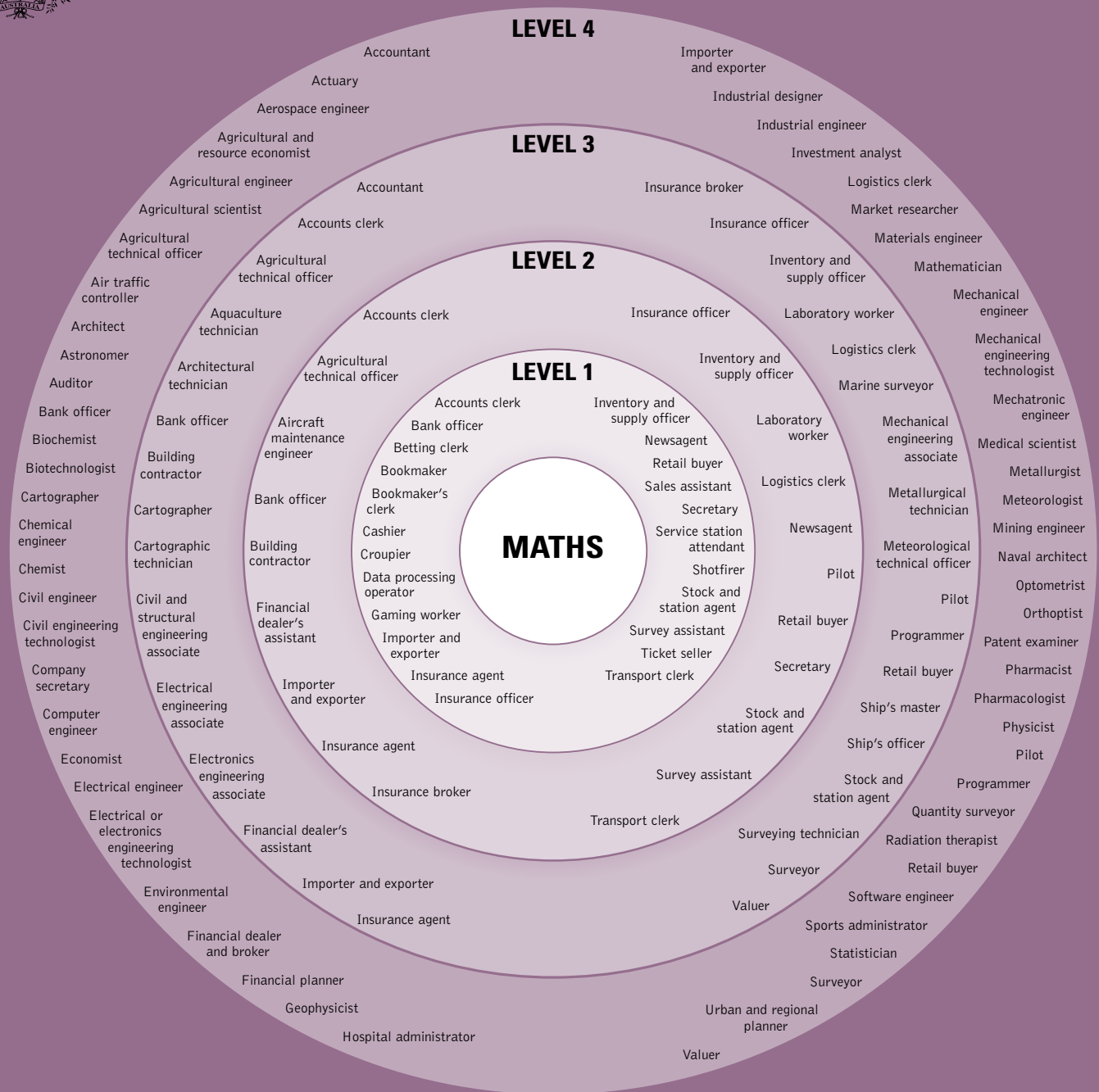
Students must satisfactorily complete all course and assessment requirements. Students must sit for the three hour Mathematics written examination at the Higher School Certificate and an additional two hour written examination based on the Extension one course.

### **Do students need to have studied any particular course for the School Certificate to do these courses?**

Students selecting mathematics extension one are recommended to have studied the Stage 5.3 Mathematics course.

### **Are there any restrictions on student if they select this course?**

Mathematics extension is a one unit course to be done in conjunction with the two unit course. Students cannot select to study general mathematics and mathematics extension one.



# Do you enjoy or are you good at MATHS?

Have you considered the occupations above?

## Usual training requirements

- LEVEL 1** Usually has a skill level equal to the completion of Year 10, the Senior Secondary Certificate of Education, Certificate I or Certificate II qualification. Australian Apprenticeships may be offered at this level.
- LEVEL 2** Usually has a skill level equal to a Certificate III or IV or at least three years relevant experience. Australian Apprenticeships may be offered at this level.
- LEVEL 3** Usually requires a level of skill equal to a Diploma or Advanced Diploma. Study is often undertaken through TAFEs or Registered Training Organisations. Some universities offer studies at this level.

**LEVEL 4** Usually requires the completion of a Bachelor Degree or higher qualification. Study is often undertaken at university.

This chart shows a selection of jobs that have some relation to the subject of **MATHS**.

The four education and training levels are to be used as a guide only. These levels indicate the most common education and/or entry requirements for these jobs.

For further information visit [www.jobguide.education.gov.au](http://www.jobguide.education.gov.au) and [www.myfuture.edu.au](http://www.myfuture.edu.au)

