



Mathematics A Level

Why study this subject?

As a nation we are not training as many people with mathematical skills and qualifications as we need. Consequently, those people who are well trained in this subject are in demand and generally have excellent career prospects. Mathematics also develops essential skills used in many other subjects.

Entry Requirements

Please see the entry requirements page on the school website.

Students must have a very good understanding of fractions, indices, written multiplication and division. They need to have an exceptional understanding of how to manipulate algebra and how to sketch and interpret graphs as the increase in algebra is vast. **Students will be asked to sit a suitability test in the summer term, after their GCSE exams, to ensure they are suitable for this course.**

Content

The A Level course will consist of Pure and Applied Mathematics.

Pure Mathematics: The study of topics already met at GCSE but extends beyond this level. This includes familiar areas of mathematics such as quadratic equations, simultaneous equations, trigonometry and graphs. It also contains introductory work on higher level topics such as calculus.

Applied Mathematics: The study of statistics and mechanics. Statistics focuses on further study of topics already met at GCSE which are used in data analysis. This includes histograms, cumulative frequency graphs, measures of location and spread and probability theory. New topics are also covered such as regression lines, discrete random variables and the normal distribution. Mechanics relates to understanding why objects move in the way that they do when subject to given forces and why some objects remain stationary despite being subject to forces. Students will have met some of the concepts previously as part of their GCSE Science course.

Assessment

All units are assessed by external examination at the end of the two year course.

Future courses and possible careers

Success in A Level Mathematics can lead to degree or other higher education courses in many different subjects:

- it is essential for Mathematics based courses
- it is highly recommended for most Science, Engineering and Technology courses
- it makes certain aspects of Business and Financial courses easier to study
- it supports the study of Humanities where data analysis is used to draw conclusions

Employers recruiting students who have completed advanced level studies value a pass in Mathematics. This is because it shows a logically trained mind and the ability to solve problems.