



## **Mathematics A Level (Edexcel)**

### **Why study this subject?**

Mathematics is a fantastic subject for anyone who enjoys strategically solving problems, working hard and who generally has a passion for the subject. It builds on known concepts as well as extending them into new and exciting applications. As a nation we do not have enough people training in the Mathematical subjects, and as a result those people who are well trained in this subject are in demand and have excellent career prospects. Mathematics is also a fantastic accompaniment to many other A level subjects.

### **Entry Requirements**

Please see the entry requirements page on the school website.

### **Content**

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

**Pure Mathematics:** Many topics are already touched on in GCSE, but significantly extended at A level, as well as meeting a range of interesting new topics. Familiar areas of mathematics include quadratic equations, simultaneous equations, trigonometry, vectors and graphs. New topics include calculus, logarithms and binomial expansion.

**Applied Mathematics:** This module consists of both Mechanics and Statistics. Statistics focuses significantly on skills used for data analysis, including histograms, cumulative frequency graphs, measures of location and spread and probability theory from GCSE, as well as new topics such as regression lines, discrete random variables and the normal distribution. Mechanics relates to understanding why objects react in the way they do to given forces.

### **Assessment**

All units are assessed by external examination at the end of the two-year course, unless you are also taking Further Mathematics, where you will sit your A level Mathematics exam at the end of year 12. There are three exams (all calculator): 2 Pure Mathematics, 1 Applied Mathematics.

### **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 Social Sciences where data analysis is used to draw conclusions

Employers recruiting students value those who have been successful in advanced level Mathematics, as it shows a logically trained mind, the ability to solve problems, and a diligent attitude to work.