Mathematics & Further Mathematics

Mathematics
Examination Board: AQA
Specification: 7357

Further Mathematics
Examination Board: MEI
Specification: H645

Why should I study Mathematics?
This course is designed to help students fulfil their potential by taking and enjoying mathematics courses that are relevant to their needs post-16. This involves four key elements: breadth, depth, being up-to-date and providing students with the ability to use their mathematics in the real world.

The course is designed to provide students with the necessary interpretive and modelling skills to be able to use their mathematics and to relate what they have learnt to the world around them. Modelling and interpretation are key elements that are stressed in all areas of the course.

Mathematics has been transformed at this level by the impact of modern technology: the graphical calculator, the spreadsheet and dedicated mathematics software. There are many places where this course strongly encourages the use of such technology and this makes the work more enjoyable and relevant.

What will I learn about?
A Level students will study Pure Mathematics, Statistics and Mechanics.

Further Mathematics
This counts as a second A level and can either be one of your three choices or taken as an addition fourth choice. Students cannot study Further Mathematics without taking Mathematics.

How will I be taught?
A Level students will be taught by one or two mathematics specialists. Further Mathematics students will be taught by two mathematics specialists.

You will be introduced to a wide variety of new techniques and shown how to apply these techniques to problems. You will then be expected to spend time outside of lessons gaining more experience of applying these techniques to a range of problems. In the period of time directly proceeding examinations much time is spent working through past papers.

Application beyond school:

Mathematical skills at a high level are essential in the modern and technological world we live in. Logical thinking and problem solving skills developed throughout the course are transferable to all areas of business, commerce and industry end are in great demand.

Many students at this level are taking mathematics as a support subject. Their needs are almost as diverse as their main fields of study, and consequently this subject includes the breadth of several distinct strands of mathematics and a firm foundation in the basic skills that they will need in their main specialism.

There are, however, those students who will go on to read Mathematics, Applied Science, Engineering or Economics at university. These students need the challenge of taking the subject to greater depth and this is provided by the considerable wealth of Further Mathematics units in the course. Students considering courses beyond school in these areas are strongly encouraged to study Further Mathematics.

Assessment Format:

Level	Component	Duration	Marks
A Level	Three papers covering the compulsory content of: Paper 1 - Pure Mathematics Paper 2 - Pure and Statistics Paper 3 - Pure and Mechanics Any content from Paper 1 can be assessed in Papers 2 and 3.	Each paper will be 2 hours Year 13	Each will be: 100 marks $33\frac{1}{3}\%$ of the A Level
A Level Further Mathematics	Four papers Compulsory Core Pure Mathematics Mechanics Minor Statistics Minor Modelling with Algorithms Minor	 2 hours 40 mins 1 hour 15 mins 1 hour 15 mins 1 hour 15 mins Year 13	 50 % of the A Level $16\frac{2}{3}\%$ of the A level $16\frac{2}{3}\%$ of the A level $16\frac{2}{3}\%$ of the A level

Are there any special requirements?

We expect you to have grade 7, 8 or 9 at GCSE for Mathematics, and a grade 8 or 9 at GCSE for Further Mathematics A Level.

There will also be an Initial Baseline Mathematics Test in the first week of teaching that will focus on the most important GCSE algebra skills that are essential for success at Mathematics A level. It is expected that preparation for this is done over the summer and we recommend the following books.

Head Start to AS Maths (by CGP Books)
Bridging GCSE and A Level Maths Student Book (by Collins)

Love of Learning, pride in diversity, excellence for all