

Sixth Form Courses

Mathematical Studies

Why take this subject?

Mathematical Studies is designed to teach you the maths *you* need:

- In your other A Levels
- In your future jobs
- In your own life

This is completely different to GCSE Maths. There is no self-standing algebra, and you will see that what you are learning is directly applicable to your life.

This is an excellent course for anyone who needs to be able to use mathematics in real-life situations, but who does not want to study A Level Maths. You shouldn't, however, think of Mathematical Studies as a soft option: you will still have to work hard to get any results out of it.

NOTE: Mathematical Studies is an additional half subject; you still pick 3 other subject choices. You will have 2 to 3 hours of Mathematical Studies lessons each week.

If you are willing to work really hard, then it is possible to complete Mathematical Studies at the end of year 12, giving you more time to focus on your other subjects in year 13. Otherwise, you will sit the exam at the end of Year 13.

What do I need to have studied at GCSE?

You will need to have achieved a grade 5 at GCSE Higher. Please note that a grade 5 in a Foundation paper will *not* be sufficient.

What will we study?

All the topics you will be studying are going to be covered in Year 12, to give everyone the opportunity to sit the exam after one year. If you sit the exam at the end of Year 13, you will be taught the topics twice.

The topics are as follows:

- Analysis of data (collecting and sampling, representing).
- Maths for personal finance (percentages, interest rates, cost of credit, taxation, budgeting).
- Estimation (modelling cycle, Fermi).
- Business Estimation
- Understanding Statistics
- Finance: Tax, National Insurance, Loans and money problems
- Critical Analysis
- Critical analysis of given data and models (including spreadsheets and tabular data)
- presenting logical and reasoned arguments in context
- communicating mathematical approaches and solutions
- analysing critically
- The Normal distribution
- Probabilities and estimation
- Correlation and regression
- Advanced Statistics – designed to help students studying Psychology, Biology, Physics, Chemistry
- Graphical Techniques – designed to help students studying Chemistry or Biology

How will I be examined?

You will have two 90-minute exams, all at the end of Year 12, and possibly Year 13. Each contributes 50% to your final grade.

You will also sit internal examinations in November, February and April of Year 12 and, possibly, Year 13.

What super curricular opportunities will be available to me?

We are planning to host talks on applications of topics to other subjects (such as psychology and geography), as well as to work situations.

What can this subject lead to?

Almost every degree course, apprenticeship scheme and indeed almost every job requires a good understanding of mathematics. This course will help you in your future, whatever you decide to do.

In addition, this course is worth the same UCAS points as an AS.

