Further Mathematics

Why study Further Mathematics?

Further Mathematics is an A level qualification which both broadens and deepens the mathematics covered in the A level Mathematics. Students taking Further Mathematics find it a rewarding and stimulating course. If you enjoy Maths, it provides a challenge and a chance to explore new and more sophisticated mathematical concepts.

It enables you to show yourself as an able mathematician in the university and employment market. If you are planning to go onto courses or careers with a high Mathematics content such as Physics or Engineering, Further Maths gives you a real advantage. Most students also find that by studying Further Maths they improve their attainment at A level Mathematics.

What does the course cover and what is expected of you?

Students will also need to be studying A level Mathematics.

The year 12 units go 'wider' rather than much harder than the Mathematics A level and you will be able to study new areas such as complex numbers, matrices and 3D lines and planes.

The year 13 pure units of the course are harder but well within the grasp of an able mathematics student and are excellent preparation for a university mathematical or scientific course or career.

As well as explanations of new topics, much of the lesson time will be spent in discussions of problems. The group is usually quite small (2 or 3 students) which gives you the opportunity for a great deal of individual teacher support. There are some very good IT resources for the Further Maths units to support both lessons and self-study.

Prep will usually be questions from a text book (all students are provided with one) or a problem sheet to practice the skills learnt in different situations. Teachers are happy to share their lesson notes and are always happy to help you sort out any difficulties. There will be one evening a week when you can simply "drop-in" for support. In addition to the lessons you should expect to spend 5-8 hours a week to complete written work, to review past topics and prepare for assessments.

Where can it take you?

Although not essential for following a Mathematics, Engineering or Scientific degree at most Universities, Further Mathematics makes these courses much more accessible and increases your likelihood of a successful transfer to higher education. If you wish to study Mathematics at a Russell Group University then you will almost certainly require Further Mathematics A level.

Entry requirements

You will need a level 6 or above, along with very good algebra skills.

Course assessment

No coursework.

AS is assessed with an exam in the summer of year 12. It consists of two papers (1 hour 40 minutes each), one on Pure maths and the second covering Applied maths. Students may or may not take this exam in the summer of year 12 depending on their decision on whether to continue into year 13.

The full A level will be assessed with four exams in the summer of year 13. There will be four 1½ hour papers the first two covering Pure maths and the third and fourth following the applied topics chosen, most likely to be Statistics and Mechanics.

Exam Board

Edexcel

Student View

“…I was so pleased I had taken Further Maths, it made the first year so much easier and I didn’t have to go to the extra lectures!"

Teachers Tip

If you enjoy Maths and have a flair for the subject then studying Maths and Further Maths could be a good choice for you.