



FURTHER MATHEMATICS

QUALIFICATION: AS/A Level

Examination Board: EDEXCEL

What do I need to know or be able to do before taking this course?

Students should have a Grade 8 or 9 in GCSE Mathematics. This A-level must be taken alongside A-Level Mathematics and cannot be taken on its own.

What will I learn on this A Level course?

- **Students taking Further Mathematics overwhelmingly find it to be an enjoyable, rewarding, stimulating and empowering experience.**
It is a challenging qualification, which both extends and deepens your knowledge and understanding beyond the standard A level Mathematics. Students who do it often say it is their favourite subject.
- **For someone who enjoys mathematics, it provides a challenge and a chance to explore new and/or more sophisticated mathematical concepts.**
As well as new learning new areas of pure mathematics you will study further applications of mathematics in mechanics, statistics and decision mathematics.
- **Students who take Further Mathematics find that the additional time spent studying mathematics boosts their marks in single A level Mathematics.**
Any student capable of passing an AS/A level in Mathematics should also be able to pass AS Further Mathematics. Studying Further Mathematics consolidates and reinforces your standard A level Mathematics work, helping you to achieve your best possible grades.
- **It makes the transition from sixth form to university courses which are mathematically rich that much easier as more of the first year course content will be familiar.**
If you are planning to take a degree such as Engineering, Sciences, Computing, Finance/Economics, etc., or perhaps Mathematics itself, you will benefit enormously from taking Further Mathematics, at least to AS level. AS Further Mathematics introduces new topics such as matrices and complex numbers that are vital in many STEM degrees. Students who have studied Further Mathematics find the transition to such degrees far more straightforward. If you decide to study for a mathematically rich degree during Year 12, but are not taking AS Further Mathematics it is often possible to start AS Further Mathematics alongside A level Mathematics in Year 13.
- **It enables students to distinguish themselves as able mathematicians in their applications for university and future employment.**
Further Mathematics qualifications are highly regarded and are warmly welcomed by universities. Students who take Further Mathematics are really demonstrating a strong commitment to their studies, as well as learning mathematics that is very useful for any mathematically rich degree. Some prestigious university courses require you to have a Further Mathematics qualification and others may adjust their grade requirements more favourably to students with Further Mathematics.
If you are not planning to study for mathematically rich degrees but are keen on mathematics you will find Further Mathematics a very enjoyable course and having a Further Mathematics qualification identifies you as having excellent analytical skills, whatever area you are considering for a career.

What kind of student is this course suitable for?

This course will appeal to students who:

- enjoy solving mathematical problems and applying their mathematical skills to solve real life problems;
- want to go on to study mathematics or engineering at a higher level
- have a high level of resilience with mathematics

What is covered on the AS/A level course?

AS and A level will be separate qualifications. An AS level qualification will no longer count towards A level. The content is examined as follows:

Title	Component	Assessment
AS Further Mathematics	Paper 1: Further Pure Mathematics	1.5 hours
	Paper 2: Further Mathematics Option	1.5 hours
A Level Further Mathematics	Paper 1: Further Pure Mathematics 1	1.5 hours
	Paper 2: Further Pure Mathematics 2	1.5 hours
	Paper 3: Further Mathematics Option 1	1.5 hours
	Paper 4: Further Mathematics Option 2	1.5 hours

The Further Mathematics options are:

- Further Pure
- Further Statistics
- Further Mechanics
- Decision Maths

What could I go on to do at the end of my course?

- Follow a degree course in mathematics, the sciences, psychology, geography, sociology, engineering, medicine plus a number of related subjects;

Mathematics is a highly rated subject and even if you do not intend to study it further, an AS or A level qualification would demonstrate your ability to think logically, solve problems and communicate ideas precisely. These are all skills that are valued by employers.

Equipment needed

You will need to purchase an Advanced Scientific calculator. You will be given advice when you start the course.