

## Further Mathematics

### Course Specification - OCR Further Mathematics: A-Level 7892

[\(Link to OCR Further Mathematics Specification\)](#).

### The Structure of the Further Mathematics Course

A level Further Mathematics can only be taken in addition to A level Mathematics and is aimed at the strongest mathematicians, especially those considering courses with a significant mathematical element at University. It consists of Further Pure units FPI, FP2, plus four other units, at least three of which must be Application units. This is a two year course.

### Form of Assessment/Examination

Each module has an examination of length 1 hour 30 minutes.

All students will take the examinations in Pure Mathematics and Applied Mathematics in January and June of Year 12 and Year 13. This encourages students to work consistently throughout both years in the Sixth Form. A module may be repeated at a later sitting to obtain an improved score.

The more usual distribution of modules is:

Year 12 - Core 1, Core 2, Core 3, Core 4, Mechanics I, Mechanics 2 and Statistics 1.  
Year 13 – FPI, FP2, FP3, Decision Mathematics I **and**  
**either** Statistics 2 and Statistics 3 **or** Mechanics 3 and Mechanics 4

These final two further Applied Modules are largely dictated by the course students wish to follow at University. A student who decides to do Further Mathematics A level will therefore complete 7 modules instead of 6 and so the best five module scores will go alongside the compulsory FPI module to make up the grade for this A level.

### Coursework

There is no coursework element in any of the modules.

### Calculators

In all modules, scientific or graphical calculators are allowed. Boys are encouraged to obtain and use a graphical calculator (Casio fx-9750G PLUS) but this should be ordered through the School after consultation with the relevant members of staff.

### Academic Requirements

Students who really enjoy Mathematics, and would welcome the opportunity to study complex algebra and new abstract topics, should consider taking Further Mathematics A level. However, students should consider this option only if they obtained Grade A\* at GCSE. An interest in Mathematical processes, the ability to cope with abstract ideas, the determination to practise techniques and a sense of achievement when worthwhile results are achieved are all fundamental to the successful student of Further Mathematics.

Students who wish to study mathematical subjects at some universities, notably Cambridge and Warwick, may be required to sit extra examinations (STEP or AEA). We provide support and study for such students.

### **Why do Further Mathematics?**

Further Mathematics is a course designed for the particularly able Mathematician. Students taking this course usually fit into one of three categories: those who want to study Mathematics at university, those who might be contemplating an Oxbridge course for which some Mathematics might be a requirement and those students who enjoy Mathematics and wish to be intellectually challenged.

The course is highly regarded by University admissions tutors of all disciplines. Students who have studied Mathematics will acquire skills and knowledge that can be applied in many fields. In addition to the acquisition of mathematical skills, students will develop their powers of reason and logic, and their communication skills. Because these skills are transferable, the worth of having studied Mathematics is universally recognised.

As well as being an excellent intellectual challenge for anyone, this course is invaluable for those who wish to study Mathematics, Engineering, Physical Science courses, Economics or Actuarial Science.