## **Further Mathematics**

Further Mathematics covers additional mathematics content which goes into much greater depth of study than regular maths. The course is mainly delivered online through the Advanced Maths Support Programme (AMSP), with some additional tutorial time provided in school. Assessment is in the form of two 90 minute exams on the 'core' content, with each paper worth 25% of the total marks. A further two 90 minute papers are then chosen as 'options' from option block 1 and option block 2, with each paper again carrying 25% of the total marks.

## **Entry Requirements**

Further Mathematics is only available to students who have achieved a grade 9 in their GCSE and plan on pursuing further study in a primarily maths based qualification such as maths or physics. Since a proportion of the study is self-guided it should only be for those who are extremely keen to study mathematics and prepared to devote adequate time to their studies. Mathematics A Level is a required option in order to study Further Mathematics as much of the course is built upon ideas which are developed in the standard Mathematics course. Initially students are enrolled for the AS course, with an exam at the end of Year 12. Provided they are successful and wish to continue, this can then carry on into Year 13 and the full A2 course.

## What will you study?

You will study the following topics:

Core content	Option 1 units	Option 2 units
Proof	3A: Further Pure Mathematics 1	4A: Further Pure Mathematics 2
Complex numbers	3B: Further Statistics 1	4B: Further Statistics 2
Matrics	3C: Further Mechanics 1	4C: Further Mechanics 2
Further algebra and functions	3D: Decision Mathematics 1	4D: Decision Mathematics 2
Further calculus		
Further vectors		
Polar coordinates		
Hyperbolic functions		
Differential equations		

Further Mathematics is a very demanding course and should not be undertaken lightly. It requires dedication and focus, but provided students are prepared to apply themselves it provides a fascinating insight into new and complex areas of mathematics. It is the perfect subject for those who wish to study Mathematics or Physics at University as much of the content is covered within the first semester of study, and so provides a good head-start to students in these disciplines.

