



AS & A Level Further Mathematics

KS5 Leader: Mr A Houghton • Exam Board: Edexcel

Course Entry Requirements:

GCSE Grade 7 in Mathematics.

Course Outline:

Further Mathematics extends the work in normal mathematics, and covers a wider range of topics. You should consider studying Further Mathematics if you are passionate about the subject and want to explore the links between seemingly unrelated areas of mathematics.

This course is for those students who really enjoy the challenge of mathematics and have the ability to work through difficult topics. Students need to be working with confidence in their core topics in conjunction with the further topics through higher-level problem solving. You must be highly motivated and prepared for significant work outside of lessons. This is especially appealing for those students who are looking to study a maths related course at Russell Group universities including Mathematics, Physics and Engineering.

The course is a 2 year linear course for A-Level or 1 year AS as an enrichment option.

The A-Level course consists of two compulsory Further Pure modules and then two decision mathematics modules.

The AS course consists of one compulsory Further Pure module and decision mathematics.

Further Pure Mathematics:

- When studying Further Pure you will be looking at various additional topics not covered in typical core lessons, such as complex numbers, polar coordinates, proofs, matrices, Maclaurin and Taylor Series, Hyperbolic Functions and differential equations.

Decision:

- When you study Decision Mathematics you develop your ability to solve problems logically and apply mathematical algorithms to problems. Decision mathematics studies a wide range of applications to which unusual, but methodical algorithms and logical thinking may be applied. There are strong links with computer science and operations research.

Assessment:

A-Level - 4 exams at the end of year 13. All equally weighted and 90 minutes in length.

AS Enrichment - 2 exams at the end of year 12. Both equally weighted and 100 minutes in length.

Learning strategies:

- Note taking
- Collaborative discussions
- Problem solving
- Mnemonics
- Linking of different aspects of Maths.
- Independent research and presentation
- Independent practice outside of lesson time