



Further Mathematics

QUALIFICATION: A-LEVEL

Awarding Body:

OCR

Length of Course:

2 Years

<http://aaasixthform.com/course/gcse-mathematics/>An AS or A Level in Further Mathematics is both broader and deeper than A Level Mathematics. Further Mathematics builds from GCSE Mathematics and AS and A Level Mathematics. As well as building on the algebra and calculus introduced in AS and A Level Mathematics, the Further Mathematics pure core content introduces complex numbers and matrices; fundamental mathematical ideas with wide applications in mathematics, engineering, physical sciences and computing.

This course is for students with a genuine love of Mathematics and can only be taken alongside AS/A-Level Mathematics, as it is not an option on its own.

Course Content:

The Further Mathematics qualifications build on the skills, knowledge and understanding set out in the AS/A Level subject content for Mathematics.

The content is separated into three areas: Further Pure Core Mathematics, Further

Statistics and Additional Further Pure Mathematics.

The topics studied over the two years are: proof, complex numbers, matrices, further vectors, further algebra, sequences and series, hyperbolic functions, further calculus, polar co-ordinates, differential equations, probability, discrete random variables, continuous random variables, linear combinations of random variables, hypothesis tests and confidence intervals, chi-squared tests, non-parametric tests, correlation, linear regression, number theory, groups, surfaces and partial differentiation.

Assessment at AS Level is through three equally weighted examinations, each 1 hour 15 mins in length, taken at the end of Year 12. Students are allowed the use of a calculator in all papers:

Paper 1: Further Pure Core

Paper 2: Further Statistics

Paper 3: Additional Further Pure Mathematics

Assessment at A Level is through four equally weighted examinations, each 1 hour 30 mins in length, taken at the end of Year 13. Students are allowed the use of a calculator in all papers:

Paper 1: Further Pure Core 1

Paper 2: Further Pure Core 2

Paper 3: Further Statistics

Paper 4: Additional Further Pure Mathematics

Career Progression:

An AS or A Level in Further Mathematics is for students who wish to study beyond an A Level in Mathematics, and provides a solid foundation for progression into further study in a wide range of highly mathematical disciplines that require knowledge and understanding of sophisticated mathematical ideas and techniques particularly in mathematics, engineering, computer science, the sciences and economics.

ENTRY REQUIREMENTS

Mathematics GCSE Grade 7 or better is recommended but those with a Grade 6 will be considered on an individual basis

FURTHER INFORMATION

Further Mathematics cannot be taken as a course without studying A level Mathematics alongside of it. This course is usually taken as a fourth choice A level.

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