



# Further Mathematics A Level



**Exam Board:** Edexcel

**Entry requirements:** Grade 7 in GCSE Maths, Grade 4 in GCSE English Language or Literature

## Intent

### Structure

Students choosing Further Maths A Level should have a strong passion and curiosity for this subject. Further Maths challenges and extends all previously known knowledge and builds a young Mathematician into a confident problem solver. Further Maths takes information from normal Maths A Level and packages it in a deeper more complex environment, whilst diving deeper into topics and bridging the gap further between post-16 Maths and degree level Mathematics.

Students in year 12 learn begin by learning about the fascinating world of Complex Numbers which weaves its thread throughout the whole course. What was once impossible, is now possible. Further Maths curriculum contains fewer mandatory elements, allowing a small choice for students with their "option" element. The core content ranges from Proof, Complex Numbers, Matrices, Further Calculus and Further Vectors. In year 13 this is expanded with Polar Coordinates, Hyperbolic Functions and 1<sup>st</sup> and 2<sup>nd</sup> Order Differential Equations. The option subjects of Statistics and Decision are chosen which include Binomial and Poisson Distributions, Hypothesis Testing, Chi Squared Tests, Algorithms and Graph Theory, Critical Path Analysis and Linear Programming.

## Implementation

### Content & Sequencing

AS Level Further Mathematics is split into the following:

50% = Pure Maths

50% = Statistics and Decision

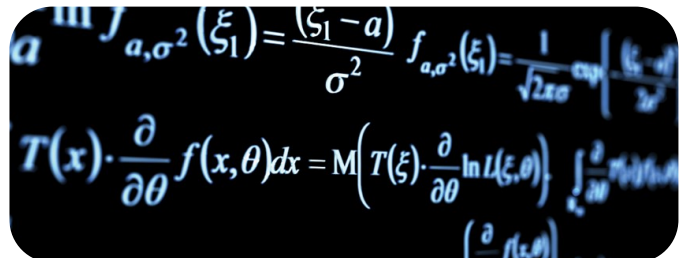
A Level Further Mathematics is split the same.

### Assessment Methods

AS Assessments can be taken at the end of year 12, but results do not go towards any future A Level examinations.

AS Examinations = 2 Papers, 2x100mins

A Level Examinations = 4 Papers, 4x90mins (2x Core, 1x Stats and 1x Decision)



## Impact

### Onward Progression

Studying Further Mathematics A Level is a step further towards a University degree in a Mathematical based subject. Whilst not normally a requirement for all Universities, many do now stipulate that some form of Further Maths is taken before entering onto their courses.

Further Mathematics A Level will allow students to study at the World's top universities when considering a Mathematical based subject such as Maths or Physics. Previous students have gone on to study Mathematics at places like Harvard, Kings College London, Manchester and Bristol University.

## Further information contact

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