



## Course Overview:

Further Mathematics is an AS or A level qualification which both broadens and deepens the mathematics covered in A level Mathematics. Further Mathematics is taken alongside an A level in Mathematics. For exceptional mathematicians this can be studied as an additional course in co-curricular time.

## Topics covered

For A level Further Mathematics half of the content will be Further Pure and the remainder will be from options such as Mechanics, Statistics, Decision Mathematics or extra Further Pure.

### TEACHERS SAY...

*For someone who enjoys mathematics, Further Mathematics provides a challenge and a chance to explore new and/or more sophisticated mathematical concepts. Studying Further Maths makes the transition from sixth form to mathematical university courses that much easier.*

### YOUR NOTES

First year of A level	Second year of A level
The course covers the overarching themes of mathematical argument, language and proof, mathematical problem solving and mathematical modelling.	
Compulsory content of proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar coordinates, hyperbolic functions	Additional compulsory content of Differential equations, trigonometry and numerical methods
Students must then study two of these options: Optional application 1 – mechanics Optional application 2 – statistics Optional application 3 – discrete	

## A level Further Maths

### Examination Board:



### Teacher contact:

**Miss C Dolan**

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**Entry requirements:** Grade 7 in Mathematics and also studying A level Mathematics.

### Type of Assessment:

The A level has three 2 hour exams. Two assess the overarching themes and the compulsory content, the other the optional applications.

**This course goes well with:**  
A Level Mathematics, Sciences

### Possible degree options

According to [bestcourse4me.com](http://bestcourse4me.com), the top six degree courses taken by students who have an A-level in Chemistry are:

- Mathematics
- Physics
- Economics
- Mechanical Engineering
- Computer Science
- Engineering

## What can I do now to help me prepare for my course?

Mathematics is an academically challenging course and most students do find the start of their A level study demanding. The key to success is, as ever, good preparation. How can you prepare? You need to be comfortable with the basic Mathematics from your GCSE course, most importantly: 'Elements of Algebra, 'Quadratic Formulae & graphs', 'Sine & Cosine Rules, 'Statistical Interpretations & Applications', " Surds" and 'Vectors".

To help prepare you should take time to a look at these websites (particularly Further Maths Support Programme).

<a href="http://furthermaths.org.uk/integral">http://furthermaths.org.uk/integral</a>	The best A level site very thorough , with lots of explanation videos
<a href="https://www.examsolutions.net/">https://www.examsolutions.net/</a>	Tutorials & past papers essential basics A level students
<a href="https://mrbartonmaths.com/students/a-level/">https://mrbartonmaths.com/students/a-level/</a>	Excellent revision material for all levels 'Vidoes, resources previous exam papers
<a href="https://studywise.co.uk/a-level-revision/maths/">https://studywise.co.uk/a-level-revision/maths/</a>	Useful sources of nice videos and explanations, resources and previous exam papers
<a href="http://www.physicsandmathstutor.com/maths-revision/a-level-core-1/">http://www.physicsandmathstutor.com/maths-revision/a-level-core-1/</a>	Excellent revision source for both A Level and Physics
<a href="https://www.teachitmaths.co.uk/">https://www.teachitmaths.co.uk/</a>	Part of the AQA suite of resources to support GCSE & A level students, Interactive resources

### Literacy, when you...

..read around the subject, and use several sources of information to answer problems.

### Numeracy, when you.....

..analyse data, draw graphs and calculate answers

### ICT, when you

..research current theories, create presentations and complete assignments.

## Possible Career options:

Studying an A level Mathematics related degree at university gives you all sorts of exciting career options, including:

Mathematician

Nuclear physicist / Engineer

Mechanical / Production engineer

Electrical / Electronics engineer

Civil engineer

Pilot

Doctor

Economist

Retail management

Patent attorney

University / College Lecturer

Secondary school teacher.

Chartered certified accountant

Environmental consultant