

# Further Maths

# Pathway 1

## Course description:

If you enjoy mathematics, it is worth considering taking Further Mathematics at A level. Students who study Further Mathematics should be genuinely interested in Mathematics and its applications. Although this is an entire A Level in its own right, it can only be studied in addition to A Level Mathematics, as it extends many of the concepts contained within that course. Students will improve their understanding of fundamental Mathematical concepts, which will be essential if they go on to study the subject at university. Students should gain an appreciation of Mathematics as a subject in its own right and will develop the ability to recognise elegance in Mathematical proof. The subject is very demanding but is potentially very satisfying, as well as being an extremely worthwhile qualification for any potential engineer, scientist or anyone thinking of studying Mathematics at university.

In 2013 the Education Minister Elizabeth Truss said: "It is not good enough that only 60 per cent of state-funded schools and colleges offering A level Maths also offer Further Maths A level. These students are potentially missing out on a place at a top university to study maths and science." We are pleased that we can offer this subject at the academy and that it is taught by highly experienced teachers.

## Qualifications required:

- In line with the entry requirements for a Pathway 1 subject.
- Grade 8 in GCSE Maths.
- Must also study A level Maths

## Aims of the course:

- Study modules in Further Pure Mathematics
- Study further applied modules, such as Statistics, Mechanics and Decision Maths.
- Develop skills of analysis and logic.

## Future prospects:

- Highly desired by universities
- Sought after by employers
- Students wishing to study Mathematics, Engineering, Physics or Computer Science at a top university may be expected to take Maths and Further Maths at A Level.

## Student feedback:

"Doing Further Maths makes normal maths seem easy!"

## Subject Teachers:

Mrs Dutt, Mr Marston, Mr Mitchell

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## Features of the course:

- This subject is in addition to 'A' Level Mathematics
- The structure of the Further Mathematics course is similar to that of Mathematics. Pure Mathematics modules involve studying Complex Numbers, Differential Equations and Matrices.
- The applied option modules of Statistics and Mechanics are continuations of those studied for Mathematics. Decision mathematics may also be studied at this level and includes algorithms, critical path analysis and linear programming.
- The Further Mathematics course will develop Mathematical skills beyond those required for A Level Mathematics.

## A Level Modules

**Core Pure Mathematics 1 (1.5 hours / 75 marks)**

**Core Pure Mathematics 2 (1.5 hours / 75 marks)**

**Further Mathematics Option 1 (1.5 hours / 75 marks)**

**Further Mathematics Option 2 (1.5 hours / 75 marks)**

## Methods of Assessment:

It is planned to continue with the Edexcel (Pearson) exam board in line with the Mathematics GCSE and Mathematics A level.

Each A level module is equally weighted and is assessed through written examination. Calculators may be used in all examinations.

Further Mathematics A level does not currently involve any coursework.