

# FURTHER MATHEMATICS

## QUALIFICATION

Advanced Level  
Exam Board: Edexcel

## REQUIREMENTS

Must be taking A level Mathematics

## Why study Further Mathematics?

Mathematics is a versatile subject, respected by employers and universities. Mathematics students become better at thinking logically and analytically and through problem solving, develop resilience and are able to think creatively and strategically. Mathematics is a requirement for most Science and Engineering degree courses and the skills you learn in Mathematics are of great benefit in a range of other subjects such as Sciences, Computing and Business studies.

## What skills are required?

We offer A Level Further Mathematics as an additional qualification for gifted Mathematicians who are excelling at A Level Mathematics. Students are expected to maintain high standards in their 3 main A levels in order to be able to continue with this course. Independent study is essential for this qualification. Students are given two hours of tuition each week.

## Course Content

Over the two year course students will cover the following content.

All students must study this core content:

- A: Proof
- B: Complex numbers
- C: Matrices
- D: Further algebra and functions
- E: Further calculus
- F: Further vectors
- G: Polar coordinates
- H: Hyperbolic functions
- I: Differential equations
- J: Numerical methods

Students must study two of these options:

- Optional application 1 – mechanics
- Optional application 2 – statistics
- Optional application 3 – discrete mathematics

## How it will be assessed:

Paper 1	Paper 2	Paper 3
Covering compulsory pure Mathematics content	Covering compulsory pure Mathematics content	One booklet on each of the two optional applied topics
2 hours	2 hours	2 hours
Calculator allowed	Calculator allowed	Calculator allowed
33.3% of overall grade	33.3% of overall grade	33.3% of overall grade
100 marks	100 marks	100 marks

## Progression

Further Mathematics is a very highly regarded A Level qualification. Increasingly it is required for degree level Mathematics courses but would also be beneficial for a wide range of disciplines including engineering and medicine.

## Staff

[katy.barlow@oldburywells.com](mailto:katy.barlow@oldburywells.com)

[april.bishell@oldburywells.com](mailto:april.bishell@oldburywells.com)