

## Further Mathematics

A Level Specification: OCR A H245

**Contact:** Mrs S Freethy

### What will I study?

#### Year 1

**Pure:** matrices, complex numbers, proof by induction, further vectors.

**Statistics:** combinatorics, probability distributions, chi-squared tests, correlation, and regression.

**Mechanics:** dimensional analysis, work-energy-power, momentum and collisions, and circular motion.

#### Year 2

**Pure:** complex exponents, differential equations, polar coordinates, and hyperbolic functions.

**Statistics:** continuous distributions, non-parametric tests, hypothesis tests and confidence intervals

**Mechanics:** centres of mass, oblique collisions, vertical circular motion, linear motion under a variable force

### How will I be assessed?

Four exams, each one hour 30 minutes

**Pure Core 1:** 75 marks: 25%

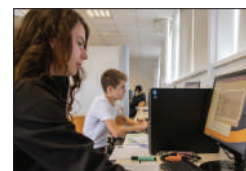
**Pure Core 2:** 75 marks: 25%

**Statistics:** 75 marks: 25%

**Mechanics:** 75 marks: 25%

### How will I Learn?

Excellent teaching will lead you through exciting and demanding topics. You will back this up with plenty of independent work, regular testing, and plenty of support. The class works well as a team, with students supporting and challenging each other through this wonderful course.



### What skills will I need?

- A deep love of Mathematics
- Excellent algebra and problem-solving skills
- Lots of resilience
- The inability to let an unsolved problem go
- Ability to work independently

We recommend students achieve a grade 8/9 at GCSE before taking an A-level in Further Mathematics.

### Careers and Progression

Further Mathematics is a requirement for Mathematics courses at some, but not all universities, and is highly desirable for many technical or mathematical degrees. Courses that list Further Mathematics as useful include Engineering, Physics, Medicine, Law and many more.

A truly **comprehensive** Sixth Form with **success** and **opportunity** for all

