



## Course Requirements

GCSE Mathematics – Grade 7

## Syllabus

AQA

## Who to Contact

Miss E Hirst  
Course Leader

## Overview

The course aims to develop a student's skills beyond A-level Mathematics. Students will reason, interpret and communicate mathematically. They will solve problems within mathematics and in other contexts to broaden their mathematical experience.

- A-level Further Mathematics content contains a core compulsory element (two thirds of the assessment) and a proportion of optional content allowing students to study statistics and mechanics in more depth

Students will take three linear exams, each of 2 hours, which are assessed at the end of the course on:

- Papers 1 and 2 - proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar coordinates, hyperbolic functions, differential equations and numerical methods.
- Paper 3 - Mechanics and Statistics
  - Mechanics - dimensional analysis, momentum and collisions, work, energy and power, circular motion, centres of mass and moments.
  - Statistics – discrete random variables, Poisson distribution, Type I and II errors, continuous random variables, Chi tests, exponential distribution, inference and confidence intervals.

Students taking A Level Further Mathematics must also take A Level Mathematics.

## You

Students need to be confident mathematically and have good algebra skills.

If you enjoy mathematics and you think you may wish to take a degree at a leading university in Mathematics, Physics, Engineering or Computer Science, you should consider taking A Level Further Mathematics.

Year 11 pupils should ask their Mathematics teacher to see if he/she thinks you are suited to the course.