



## Course Requirements

Sixth Form Entry Requirement  
plus  
GCSE Mathematics - Grade 7

## Syllabus

AQA

## Who to Contact

Miss E Hirst  
Course Leader

## Overview

The course aims to develop a student's understanding of mathematics and to use and apply standard techniques. Students will reason, interpret and communicate mathematically. They will solve problems within mathematics and in other contexts.

- A-level Mathematics is 100% prescribed, containing both pure and applied maths.
- The use of technology in the classroom is encouraged, so a large data set will be provided for students to analyse. Some exam questions will be based on this so students need to be familiar with it.
- The applied content is drawn from statistics and mechanics.
- Pure Mathematics builds on GCSE and builds on previous work done on trigonometry and calculus.
- Statistics is concerned with the collection, analysis and interpretation of data.
- Mechanics is the branch of mathematics concerned with the study of forces that act on bodies and any resultant motion that they experience. Students will understand, interpret and apply the effects of these constant and variable forces using mathematical skills.

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

**Paper 1** – proof, algebra and functions, coordinate geometry, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration and numerical methods.

**Paper 2** – any content from paper 1, vectors, quantities and units in mechanics, kinematics, forces and Newton's law and moments.

**Paper 3** – any content from paper 1, statistical sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing.

A-level Mathematics is a popular course; around 80 students enrolling in Year 12.

## You

Students need very good algebra skills.

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

Mathematics is highly valued by Higher Education institutions for admission onto a range of courses – Mathematics, Engineering, the sciences, Architecture, Business and Law – and also by prospective employers.