AQA AS & A LEVEL MATHEMATICS

Studying Mathematics at A Level will enhance your skills in problem solving and critical analysis. A Level Mathematics is a stimulating and challenging subject which introduces calculus and its applications and also builds upon topics studied at GCSE. In particular, you should enjoy and excel in the areas of algebra and trigonometry. The content covered includes Pure Maths, Statistics and Mechanics. The Mechanics modules are highly compatible with other scientific courses such as Physics and Engineering. The Statistics modules are highly compatible with other scientific courses including Psychology. This course is highly regarded by employers and universities.

COURSE CONTENT

Year 12 - you will study for AS Mathematics:

- **Pure Maths:** Proof, Algebra and Functions, Coordinates Geometry, Trigonometry, Exponentials and Logarithms, Differentiation, Integration.
- **Mechanics:** Kinematics, Forces and Newton's Laws.
- **Statistics:** Sampling, Data Presentation and Interpretation, Probability, Distributions, Hypothesis Testing.

Year 13 - you will continue to study for A Level Mathematics:

- **Pure Maths:** extends all the work in Year 12 and includes Numerical Methods and Sequences and Series.
- **Mechanics**: extends all the work in Year 12 and includes Projectiles and Moments.
- **Statistics**: extends all the work in Year 12.

ASSESSMENT

AS Level is awarded based on your performance in two equally weighted papers usually taken at the end of Year 12.

- Paper 1: 67% Pure Maths and 33% Mechanics.
- Paper 2: 67% Pure Maths and 33% Statistics.

Exams taken at AS do not contribute towards your A Level result.

A Level is awarded based on your performance in three equally weighted papers usually taken at the end of Year 13.

- Paper 1: 100% Pure Maths.
- Paper 2: 50% Pure Maths and 50% Mechanics.
- Paper 3: 50% Pure Maths and 50% Statistics.

SUBJECT COMBINATIONS

Mathematics is associated with many subjects including Biology, Chemistry and Psychology. Mechanics heavily links with Physics and Engineering. Calculus (the study of rates of change) also overlaps with some Engineering content. There are many degree courses linking Mathematics with Business.

ENTRY REQUIREMENTS

You will need at least a grade 6 in GCSE Mathematics. A grade 7 would be advisable. A grade 5 in GCSE English is also required.

You will need at least a grade D at AS in Year 12 in order to progress to A Level in Year 13.

PROGRESSION

An A Level in Mathematics is essential for many courses at university such as Mathematics, Physics, Engineering and is highly desirable in a wide range of subjects such as Chemistry, Natural Sciences, Computing, Economics and Architecture.

FUTURES

An A Level in Mathematics will advance your prospects of finding work within a wide range of sectors. It would be advantageous in the financial sector such as accountancy or insurance. Many mathematicians apply their skills within the engineering industry across all disciplines. Graduates in mathematics or mathematics related degrees can go on to work as a Statistician or Data Analyst for large multinational companies. There are many other possibilities including Computer Programming, Project Management and Teaching.