

Mathematics

Examination Board: Edexcel

Qualification: A level

Teacher Contact: Mr Brooke

Entry Requirements: Grade 7 at GCSE.

What will I study?

The first year course is comprised of two elements, Pure Mathematics and Applied Content in the ratio 2:1.

Pure Mathematics

Proof, algebra and functions, coordinate geometry in the (x,y) plane, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration and vectors.

Statistics and Mechanics

Statistics: Statistical sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing.

Mechanics: Quantities and units in mechanics, kinematics and forces and Newton's laws.

The second year course is comprised of two elements, Pure Mathematics and Applied Content in the ratio 2:1 up to an A level standard.

Pure Mathematics

The Year 1 Pure Mathematics content plus additional content: proof, algebra and functions, coordinate geometry in the (x,y) plane, trigonometry, differentiation, integration and numerical methods.

Statistics and Mechanics:

Statistics: The Year 1 Mathematics Statistics content plus additional content: statistical sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing.

Mechanics: The Year 1 Mathematics Mechanics content plus additional content: quantities and units in mechanics, kinematics, forces and Newton's laws and moments.

How will I be assessed?

At the end of the second year, Mathematics is assessed in three examinations. A 2-hour Pure Mathematics exam that covers the Year 1 content, a 2-hour exam on the remaining Pure content which builds on and incorporates Year 1 content and a 2-hour exam on Statistics and Mechanics.

Am I suited to this course?

You would be well-suited to studying Mathematics at A level if you:

- have a logical mind and enjoy using Mathematics to solve problems in real-life situations
- want to develop your problem-solving techniques.

What other subjects does it complement?

Mathematics complements a wide range of subjects. The pure elements of the course combine well with Chemistry and Physics. There are also links to other subjects including Biology, Geography, Psychology and Sociology.

Where can it lead?

Mathematics A level leads to the study of Mathematics in its own right or as a support to many other courses, such as Science, Business Studies, Medicine and Accountancy. Careers in the financial sector, e.g. banking and insurance often look for a mathematical qualification beyond GCSE.