

MATHEMATICS



Examination Board: EDEXCEL **Qualification:** A level

Teacher Contact: Mr March and Mrs Monaghan

Entry Requirements:

Ideally a GCSE grade A or above but students achieving a grade B will be accepted on the recommendation of their teacher. All students will be expected to complete some work in the summer holiday, before starting the AS course.

What will I study?

The first year course is comprised of 2 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 2 elements; Pure Mathematics and applied content in the ratio 2:1 up to an A-level standard.

Pure Mathematics:

The AS Mathematics Pure 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 AS Mathematics Statistics content plus additional content: Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions and Statistical hypothesis testing.

Mechanics: The AS Mathematics Mechanics content plus additional content: Quantities and units in mechanics, Kinematics, Forces and Newton's laws and Moments.

How will I be assessed?

The first year course of Mathematics is assessed in two examinations. Paper 1 A two hour exam covering Pure Mathematics and Paper 2 an hour exam in statistics and mechanics.

The second year course of Mathematics is assessed in three examinations. A two hour pure Mathematics exam that covers the AS content assessed at A level standard, a two hour exam on the remaining pure content which builds on and incorporates AS content and a two hour exam on Statistics and Mechanics.

Exams are taken in June.

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.

