Wollaston School Sixth Form

'Dare to know seek to understand'

Course Information

A Level Mathematics

What is A Level Mathematics

This subject carries great weight with universities. It is good support for students who study any of the Sciences, Geography, Psychology at A Level and is an important support for many university courses such as Engineering, Medicine and Finance. On its own, the subject develops understanding of algebraic proof, mechanics and statistical techniques.

What does the course involve?

This course can be divided into three units. Two will follow on from GCSE techniques and there will be one unit on Statistics and Mechanics.

What themes are studied?

Pure Mathematics
This builds on the GCSE higher course. It requires an in-depth knowledge of algebra in particular. The following represents a selection of the content:

Quadratic functions and their graphs , Properties of the discriminant, Completing the square, Inequalities, Translations, Differentiation, Integration, Definition of functions, Inverse functions, Composition of functions, Logarithms, Exponential functions, Chain rule for differentiation, Numerical integration, Simplifying rational functions, Partial fractions, Parametric equations, Addition theorems, Exponential growth and decay, Remainder theorem, Translations, Vectors in three dimensions and the Scalar product of vectors.

Statistics
A range of statistical applications will be taught including: Standard deviation, Variance, Linear scaling, Numerical measures, Probability, Discrete and continuous random variables, Normal distribution and Confidence intervals.

Mechanics
There will be an emphasis on an appreciation of real applications of mathematics. Topics covered will include: Displacement, Velocity, Acceleration, Vertical motion under gravity, Vectors, Scalar and dot products.

Assessment
There are three papers of 2h duration. Each contributes to one third of the final award. Paper 1 and 2 will assess the Pure Mathematics and paper 3 will equally assess Mechanics and Statistics.
The exam board is EDEXCEL.

For more information about the course, your suitability for it, and possible career paths for students see the displays in the Maths area, talk to your Mathematics teacher or
Mr Cunningham, Head of Mathematics Faculty.