



MATHEMATICS AS/A LEVEL

Awarding Body
EDEXCEL

Who is the course for?

This course is for students who want to study mathematics at a higher level. Students will gain an understanding of both statistics and mechanics. This A-level can be combined with many other A-levels but most commonly with the sciences, business studies, economics and ICT.

What can it lead to?

This is a subject which is highly regarded for most university courses as it shows the ability to solve problems and work with data.

The course can be used as a stepping stone to studying mathematics at degree level or to count as one of the 'sciences' when applying for a degree in medicine.

What are the entry requirements?

The minimum requirements are 5A* to C GCSE grades including mathematics and English. B grade or higher in GCSE mathematics is essential.

What will I Study?

Core mathematics, statistics and mechanics

How will I be taught?

You will normally have 2 teachers in year 12 and 13, each focusing on different topics. You will be taught in 6 lessons per week. Homework will be set twice a week and you should spend at least 4 hours per week on homework tasks.

What equipment or materials will I need?

Students are expected to purchase all textbooks and note paper and should bring a scientific calculator, ruler, pencil, compasses and pen to all lessons.

How will I be assessed?

3 modules make up an AS level

3 further modules are taken for A2
(3 modules = AS level; 6 modules = A level)

AS units studied

All students take C1 and C2. Your 3rd module will be either M1 or S1.

A2 units studied

All students take C3 and C4. Your 3rd module will be either S1, M1 or D1.

Core 1

- Algebra and Functions
- Quadratic Functions
- Equations and inequalities
- Sketching Curves
- Co-ordinate Geometry
- Sequences and Series
- Differentiation and Integration

Core 2

- Algebra and functions
- Sine and cosine Rules
- Exponentials and logarithms
- Further co-ordinate geometry
- The binomial expansion
- Radian measures
- Geometric sequences and series
- Graphs of trigonometric functions
- Trigonometric identities and equations
- Further differentiation and integration

Statistics 1

- Representations of sample data
- Methods for summarising and sampling data
- Probability
- Correlation
- Regression
- Discrete random variables
- The Normal distribution

Mechanics 1

- Kinematics of a particle moving in a straight line
- Dynamics of a particle moving in a straight line
- Statics of a particle
- Moments
- Vectors