

Mathematics

A LEVEL - EDEXCEL

What are the aims of the course?

Students will be encouraged to:

- Develop their understanding of mathematics and mathematical processes in a way that promotes confidence and fosters enjoyment
- Develop ability to reason logically and recognise incorrect reasoning, to generalise and to construct mathematical proofs
- Use mathematics as an effective means of communication
- Read and comprehend mathematical arguments and articles concerning applications of mathematics
- Take increasing responsibility for their own learning and the evaluation of their own mathematical development

What does it involve?

Core Mathematics (approximately 67%)

- This extends GCSE work in algebra, coordinate geometry and trigonometry whilst introducing new ideas and techniques, such as calculus, in abstract mathematical theory and the ideas of proof.

Mechanics (approximately 16%)

- This is a mathematical model in which systems of forces are analysed and the motion of bodies is considered by developing ideas such as acceleration, energy and momentum, which may have been met in Physics.

Statistics (approximately 17%)

- This develops the ideas of probability and statistics met in GCSE mathematics, progressing to the modelling of real life situations with probability and the analysis of real life data in statistics. Many of the techniques are used in science and in the social sciences.

How is it assessed?

Paper 1

Pure Mathematics
 Written examination
 2 hours

Paper 2

Pure Mathematics
 Written examination
 2 hours

Paper 3

Mechanics and Statistics
 Written examination
 2 hours

Are there any specific entry requirements?

Students who wish to take A Level Mathematics should have taken the Higher Tier at GCSE/iGCSE and gained at least a Level 6.

Why is it a useful qualification?

Mathematics can be enjoyable and worth studying in its own right, as well as being a supporting subject for the physical and social sciences.

There is evidence to suggest that students who apply to university to study subjects such as Economics, are given more favourable offers if they are studying A Level Mathematics.

Research carried out at the LSE has found that there is a high wage premium (up to +11%) associated with having studied Mathematics at A Level.

Mathematics imparts those skills which directly increase productivity in the work place such as the ability to think logically and to solve complex problems. Success in Mathematics also shows that the student possesses essential qualities such as determination and perseverance.

