



Overview:

The Advanced Level in Mathematics course consists of three externally examined papers; Pure Mathematics runs through all three papers. The first paper is exclusively Pure, paper 2 also tests Mechanics, and paper 3 also tests Statistics. Assessment; each paper is 2 hours, 100 marks, equally weighted towards your final grade at A Level. A calculator (including graphical) can now be used for all examinations and there is no coursework. GCE A Level Mathematics is a course worth studying not only as a supporting subject for the physical and social sciences, but in its own right. It is challenging and interesting. It builds on work already met at GCSE but also involves new ideas produced by some of the greatest minds of the last millennium.

Studying Mathematics, the aims and objectives:

- understand mathematics and mathematical processes in a way that promotes confidence, fosters enjoyment, and provides a strong foundation for progress to further study;
- understand coherence and progression in mathematics and how different areas of mathematics are connected;
- apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general;
- use mathematical knowledge to make logical and reasoned decisions in solving problems both within pure mathematics and in a variety of contexts, and communicate the mathematical rationale for these decisions clearly;
- construct mathematical proofs;
- use mathematical skills and techniques to solve challenging problems which require them to decide on the solution strategy;
- represent situations mathematically and understand the relationship between problems in context and mathematical models that may be applied to solve them;
- interpret solutions and communicate their interpretation effectively in the context of the problem;
- read and comprehend mathematical arguments, including justifications of methods and formulae, and communicate their understanding;
- use technology such as calculators and computers effectively and recognise when such use may be inappropriate;
- take increasing responsibility for their own learning and the evaluation of your own mathematical development.

Expectations:

A willingness to work hard throughout the course is important. We will expect a good attitude to have been displayed at GCSE. The ability to work accurately with algebra, trigonometry, and geometry is essential and a good understanding of probability and statistics will help, although key concepts will be revised at the start of the course. For every hour taught in lessons, students are expected to spend at least two hours in independent/private study.

Career Pathways:

A Level Mathematics is highly regarded by employers and universities as evidence of the ability to think logically, analytically, and precisely. It is a much sought after qualification for entry to a wide variety of full-time courses in higher education. There are also many areas of employment that see Mathematics as an important qualification and it is often a requirement for the vocational qualifications related to these areas. Higher education courses or careers that require A Level Mathematics or are strongly related include; Economics, Architecture, Medicine, Engineering, Accountancy, Teaching, Psychology, Physics, Computing, and Information and Communication Technology. The Statistics aspect will be very beneficial for anyone going on to study subjects such as Geography, Sociology, Biology or Psychology, which involve analysing data.

Student Testimonials:

"Combines well with other subjects." "Select Maths if you are good at it in Year 11 and enjoy it." "Enjoy the challenge but you will need to work hard." "The support from teachers inside and outside of lessons is great, use it." "It benefits the sciences, making them easier." "The statistics work has helped my understanding of other courses (Geography and Biology)." "The course does not move too fast; ideas are repeatedly applied throughout the course." "If you are confident in Year 11 there is NOT a huge jump between GCSE and A Level". "It provides a good challenge and it feels great when you get the right answer."