

**Success in Mathematics is dependent on a high standard of proficiency in algebraic techniques and so we recommend that prospective candidates are expecting to attain a grade 7 or above at GCSE and that their algebraic skills are particularly sound. The A Level course is demanding and requires consistent application from Sixth Form students.**

## Mathematics

Pure Mathematics continues developing the algebra, calculus, geometry and trigonometry studied for GCSE.

A Level Mathematics consists of Pure Mathematics, Mechanics and Statistics.

A Level Mathematics is an interesting course in itself but it is also generally regarded as a very useful support for other subjects. Physicists and Economists find certain techniques in Pure Mathematics essential to their course and Mechanics is also studied in Physics although it is given a slightly different treatment. Subjects such as Geography, Biology, Chemistry, Psychology and Business Studies make varying use of statistical techniques.

## Further Mathematics

The greater depth of the Further Mathematics syllabus benefits those who wish to study Mathematics as a discipline in its own right beyond A Level and this may be required by the top universities. Some related courses e.g. Engineering, Physics and Economics at the most competitive universities also prefer applicants to have studied Further Mathematics.

To study Further Mathematics we recommend that prospective candidates are expecting to attain a grade 8 at GCSE and have performed consistently highly over the last two years. Although not in any way essential, prospective candidates would benefit from having studied qualifications such as GCSE Further Mathematics.

A Level Further Mathematics consists of Further Pure, Mechanics and Statistics topics which continue the subject to greater depth. There is also the opportunity to study the area of Decision Mathematics.

The combination of Mathematics and Further Mathematics is a fine preparation for many future courses, such as Law, Philosophy, Management and Engineering, and is a preferred requirement to study Mathematics, Economics, Natural Sciences and ICT at the most prestigious universities. Medicine does not require Further Mathematics A Level.

At a time when most students spread their studies thinly, to be a specialist in such a logical discipline as Mathematics is a particular distinction and such candidates are in great demand in business and industry.

## Assessment

*A Level Mathematics:* 2 Pure papers (2 hours) and 1 Applied paper (1 hour).

*A Level Further Mathematics:* 2 Core Pure papers (1h 30min) and 2 optional papers (1h 30 min) from either Further Pure, Further Mechanics, Further Statistics or Decision.

## Beyond the classroom

Students have the opportunity to participate in a wealth of individual and team competitions which are organised by the UKMT. We also take part in the Sixth Form Pop Maths quiz, organised by the Liverpool Mathematical Society and the National Cipher Challenge, organised by Southampton University. Our students attend the Maths Inspiration lectures and we also organise trips to Breakout Rooms which enable our students to develop their problem solving skills. We also have a comprehensive extension programme which involves preparation for interviews and university entrance exams, as well as weekly help sessions after school.



*The National Cipher Challenge winning team*