

MATHEMATICS A LEVEL

Subject Leader: Dr Joomun & Miss Tashfeen

Syllabus: Edexcel

Course Specification: 9MA0

Why should I study the course?

A level Mathematics deepens your understanding of the natural world. We go from statistical analysis to predicting outcomes – statistics. We model real life, practical scenarios and calculate results – mechanics. Also crucially, abstracting concepts from theoretical problems, which develop algebraic ability through pure mathematics.

The course gives you the techniques required for other science-based disciplines as well as a solid foundation for future mathematics-based careers.

Course Requirements

Minimum of grade 7 at GCSE Mathematics.

What you will study

You will study Pure Mathematics (67%) alongside Statistics and Mechanics (33%). This will lead to an A Level Mathematics qualification at the end of Year 13. All the content is compulsory and requires the use of a scientific calculator.

Pure Mathematics

Similar to the content of the Core 1 to 4 of the old specification, the new specification (2017) specification Pure Maths consists of Algebra, Functions, Sequences and Series, Proof, Coordinate Geometry, Trigonometry, Exponentials and Logarithms, Differentiation and Integration, Vectors and Numerical Methods.

Statistics

You will be studying statistical sampling, data presentations and interpretation using such statistical diagrams as histograms, scatter graphs and calculations as mean, variance, standard deviation, quartiles and percentiles, and statistical distributions as normal and binomial distributions. There is also new content on hypothesis testing.

Mechanics

The mechanics content involves the study of motion of objects including displacement, velocity, acceleration, forces, Newton's Laws and moments of force.



Assessment Information

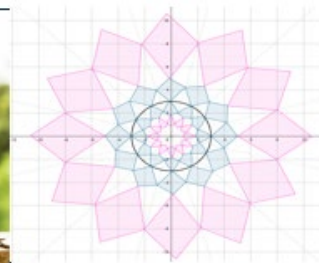
You will be assessed by means of three 2-hour papers, each worth 100 marks at the end of the 2-year course. All three papers will be taken in May/June of the same year. Paper 1 and 2 cover all AS and A Level in no particular order. Paper 3 is the applied paper (Statistics and Mechanics).

Teaching and Learning Styles

The main body of knowledge and skills will be taught through teacher-led sessions. In addition, students will be given a range of challenging enrichment activities and encouraged to share their knowledge and skills with the class and to support each other in their learning.

Independent Study

Students are expected to complete an hour of independent study for every hour that is taught.



Future/Career Pathways

Accountancy, Engineering, Medicine, Pharmacy, Actuarial Sciences, Psychology, Chemistry, Astronomy, Economics, Management Studies, Computer Science, Architecture, Law and many more.

