# Mathematics A Level

**Subject Leader: Mr Farren**

**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.

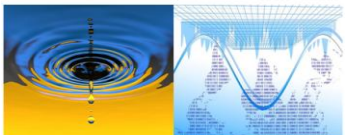
**Course Requirements**
Minimum of grade 7 at GCSE Mathematics.

**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).

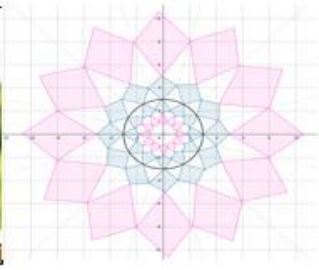
**Teaching and Learning Styles**

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.

