POST 16 SUBJECT OVERVIEW

Name of Subject - A level Mathematics

Which Examination Specification is Studied for this Course? AQA A Level maths 7357

Why should I study this course?
A-level Mathematics offers students with a good understanding of Maths the chance to study it at a higher level. It provides a thorough grounding in the mathematical tools and techniques often needed in the workplace. Techniques covered include algebra & proof, geometry trigonometry calculus, exponentials & logarithms, sequences & series and numerical methods which together form the fundamental building blocks of the subject. We will also study some applied mathematics, statistics (sampling, regression, measures of central tendency & spread, probability distributions and hypothesis testing) and mechanics (vectors, constant acceleration formulae, Newton's laws, projectile motion, friction and moments). Please note that both the pure & applied content is all standardised and no longer varies based upon exam board chosen.
Students will enjoy studying a course which will give them a strong foundation for study in other A-level subjects and many varied careers from Astronomer to Zoologist, Cryptologist to Cartographer: Statistician to Systems Engineer and Meteorologist to Mathematician!

By the end of the course students will have: an understanding of the mathematics that underpin many aspects of our lives, the ability to apply a range of mathematical skills to different situations: acute logical thinking and problem-solving abilities, and the ability to process, interpret & analyse information. We hope to see you in our A-level classicom next year!

Who is suitable to study this course? -Year 1 involves methods/topics that are used in the sciences, geography, psychology, business studies and law. The A level qualification is essential for a degree in the subject and suggested for related higher education. Courses, especially engineering, architecture, medicine, accountancy, economics, sciences and computer science.

What GCSE Qualifications Support the Study of this Course?
Maths Higher tier, Further maths, Statistics.

What are the Qualification Requirements for this Course?
We require a grade 6 in GCSE maths, but a grade 7 is recommended due to the reliance of A level maths on GCSE topics.

How is the Course Delivered? - You will be taught 5 hours of lessons per week which we expect you to follow with 5 hours of private study. You may be taught by a single maths specialist or have two teachers on a 3hour/2 hour split.

Pure Mathematics - Techniques in Proof, Algebra and Functions, Coordinate Geometry, Sequences and Series, Trigonometry, Exponentials and Logarithms and Differentiation, Integration and Numerical Methods (Advanced only).

Statistics - Techniques in sampling, data presentation and interpretation, Probability, Statistical distributions & Statistical Hypothesis testing:

Mechanics - Techniques in Vectors, Quantities and units in Mechanics, Kinematics, Forces and Newton's Laws & Moments (Advanced only)
If you are taught by 2 teachers, the pure will be split, then the mechanics will be taught by one teacher and the statistics by the other.

Subject Overview		
Half Term	Year 12	Year 13
Autumn 1	Pure (mainly topics extended from GCSE)	Pure
Autumn 2	Pure	Pure
Spring 1	Pure, Mechanics, Stats	Mechanics and stats
Spring 2	Pure, Mechanics, Stats	Mechanics and stats
Summer 1	Pure	Reivision
Summer 2	Pure (start of Y13 teaching)	Examination

How is the Course Assessed?

Praising stars
You will be assessed each half term on the topics you have covered.
Towards the end of y12 you will sit a paper that covers all your learning so far.

Y13 final examination

Paper 1-2 hrs. Pure Maths (100 marks)

Paper 2-2 hrs. Pure Maths (50 marks) & Mechanics (50 marks)

Paper 3 - 2 hrs. Pure Maths (50 marks) & Statistics (50 marks)

What is our Recommended Subject Reading list to Support your Study? -

Cambridge: A level Mathematics for AQA Student book 1 and student book 2. (these will be issued to you when you enroll.)