
MATHS

Exam Board: Edexcel



Aims of the Course

- Extend their range of mathematical skills, and techniques and use them in more difficult unstructured problems.
 - Recognise how a situation may be represented mathematically and understand the relationship between 'real world' problems and standard and other mathematical models and how these can be refined and improved.
 - Use mathematics as an effective means of communication.
 - Develop an awareness of the relevance of mathematics to other fields of study, to the world of work and to society in general.
 - Take increasing responsibility for their own learning and the evaluation of their own mathematical development.
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Types of Learning Experiences:

Students will study three units in Year 12 to achieve AS level, and three further units in Year 13 to complete A2 (details inside). The course content is delivered through lectures, classroom discussion, practical activities and use of IT

Link Subjects:

Mathematics may be taken with any other subjects and it is particularly valuable to Economics, Business Studies, Physics and Chemistry

Progression to Higher Education:

The problem solving skills and the ability to tackle tasks logically gained from maths, make mathematics relevant to many subjects at Higher Education and University. Mathematics is a highly recognised Advanced Level subject for entry to University and Higher Education and it is a useful stepping stone to Engineering, Sciences, Computing and Business related subjects..

Careers:

Mathematics is especially relevant to those wishing to pursue careers in Finance, Business, Research, Engineering, Education, Accountancy and IT

Entry requirements:

A minimum of 5 grades 9-4 at GCSE including English and Maths. GCSE English at a grade 5 or above is preferred.



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Students will follow the following units in Year 1:

Pure Mathematics

- Algebra
 - Polynomials
 - Coordinate geometry and graphs
 - Differentiation
 - Trigonometry
 - Sequences and series
 - The Binomial Expansion
 - Integration
 - Logs and Exponentials
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Students will follow the following unit in Year 2:

Mechanics

- Force as a vector
- Equilibrium of a particle
- Kinematics of motion in a straight line
- Newton's laws of motion

Statistics

- Representation of Data and Sampling
- Probability
- Distributions
- Hypothesis Testing

Assessment

All material will be assessed at the end of year 2

