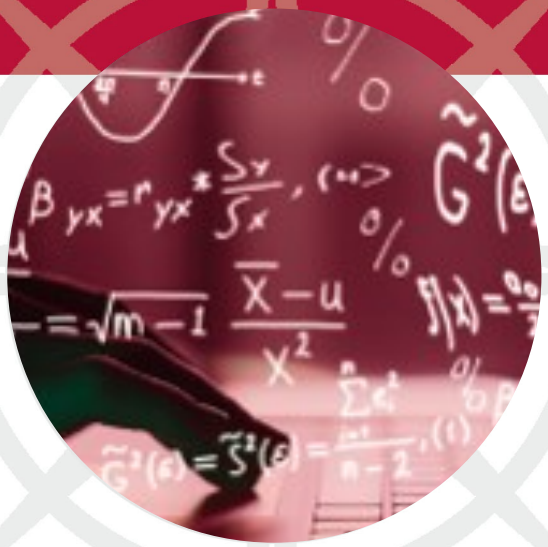
Mathematics

Edexcel Pearson

Further information please email: mail@nhgs.co.uk



Entry Requirements

NHGS Sixth Form entry requirements including a Grade 7 or above in GCSE Mathematics.

Aims of the Course

To develop problem solving and analytical skills with a qualification that is well regarded, facilitating entry to a wide range of careers and further education courses. To further develop logical reasoning skills and the ability to construct mathematical proofs. To use technology effectively to analyse data and to be aware of its limitations. Refine and improve the relationship between mathematical models and the real-life situations they represent.

Course structure and content

A Level Mathematics studies elements from pure mathematics, statistics and mechanics.

Pure Mathematics deepens knowledge of algebraic techniques, geometry, trigonometry and calculus. These concepts and techniques are fundamental to further study in a variety of subjects, especially STEM careers. Understanding statistics allows mathematicians to make predictions about future events. Many subjects make use of statistical information and techniques to analyse data from studies such as psychological or medical trials. An understanding of probability and risk is important in careers like insurance, medicine, engineering and the sciences. Mechanics is a branch of mathematics involving modelling and analysing the physical world around us, including the study of forces and motion. Mechanics is especially useful to students studying physics and engineering.

Pure Content – Proof, algebra and functions, coordinate geometry in the (x, y) plane, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, numerical methods, vectors.

Mechanics Content – Quantities and units in mechanics, kinematics, forces and Newton's laws, moments.

Statistics Content – Statistical sampling, data presentation and interpretation, probability, statistical distributions, statistical hypothesis testing.

Assessment

At the end of the Lower 6th, students sit an exam on all of the Lower 6th content. This does not count towards the final grade, but assesses the content at this half-way point before progression to the Upper 6th.

The course is assessed at the end of the Upper 6th with three written examination papers, each paper having equal weighting.

Paper 1 - Pure Mathematics (2 hours)

Paper 2 - Pure Mathematics (2 hours)

Paper 3 - Mechanics and Statistics (2 hours)

Future career opportunities

Apprenticeships and further education courses in Mathematics, Engineering, Computing, Economics, Accountancy, Medicine, Physical Sciences, Biological Sciences, Environmental Sciences or other STEM courses.

Please scan here for further course information.