Further Mathematics

Edexcel Pearson

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



Entry Requirements

NHGS Sixth Form entry requirements including a Grade 8 or above in GCSE Mathematics.

Aims of the Course

Develop an understanding of processes, logical reasoning and how to construct mathematical proofs.

Extend range of skills and techniques to use in more difficult unstructured problems.

Develop an understanding of coherence and progression in Mathematics.

Refine the relationship between 'real world' problems and mathematical models.

To use technology effectively and to be aware of limitations.

Course structure and content

A Level Further Mathematics studies additional elements from Pure Mathematics, Statistics and Mechanics that are not covered by the Mathematics A Level and is taught as a separate but parallel A Level course.

Core Pure Content – Proof, complex numbers, matrices, further algebra and functions, further calculus, further vectors, polar coordinates, hyperbolic functions, differential equations.

Mechanics Content – Momentum and impulse, work, energy and power, elastic springs and strings, elastic collisions in 1D and 2D.

Statistics Content - Statistical and probability distributions, correlation, hypothesis testing, Chi-squared tests, estimation, confidence intervals.

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 four written examination papers

Paper 1: Core Pure Mathematics 1

Paper 2: Core Pure Mathematics 2

Paper 3: Further Mechanics 1 (option C)

Paper 4: Further Statistics 1 (option B)

Each paper is 1 hour and 30 minutes written examination and represents 25% of the qualification.

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.