

Guilsborough Academy Sixth Form

KS5 CURRICULUM

Course Title: A Level Further Mathematics

Examination Board: Edexcel (based on the draft specification)



Entry Requirements: Grade 7 or above in GCSE Mathematics and **MUST** be studying A level Mathematics

Assessment: 4 equally weighted units each examined in a 1h 30 minute exam

These modules cover Further Pure 1 and Further Pure 2 alongside two of the following;
Further Statistics, Further Mechanics or Decision Maths.

Is This Course Right For Me?

If you have thoroughly enjoyed Mathematics thus far and have a good understanding of algebraic techniques then Further Mathematics may be for you. In this course you will have the opportunity to explore familiar Core Mathematics in greater detail as well as meeting some higher level topics for the first time. By following the Further Mathematics course you will also be able to study more additional areas of applied Mathematics such as Statistics, Mechanics and Decision Mathematics in more detail.

If you are thinking of studying Mathematics or a related course at university, then Further Mathematics is required for some courses and advisable in many others.

Unit Contents:

Further Pure Maths Includes: Matrices, Complex Numbers, Proof, Conic Sections, Differential Equations, McLaurin and Taylor Series, Polar Coordinates, vectors, Differentiation and Integration

Decision Maths Includes: Graph Theory, Game Theory, Network Theory. Linear Programming. Allocation and Assignment Problems, and Dynamic Programming.

Mechanics Includes: Modelling, Statics, Kinematics, Moments, Vectors, Centres of mass, Collisions, Circular Motion, Elastic strings

Progression:

This course is suitable for those who would like to continue to study Mathematics at university, or pursue a career in a range of different areas including Physics and general science, Engineering, Banking and Finance, Teaching.

Example of university courses and grades required

- Imperial College London BSc Mathematics A* A* Mathematics and Further Mathematics A in another subject.
- University of Bristol BSc Mathematics AAA including Mathematics and Further Mathematics.
- University of Manchester BEng Mechanical Engineering AAB including Mathematics.

Further Information Contact:

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