FURTHER MATHEMATICS

SPECIFICATION

A Level   AQA   Further Mathematics (7367)

OBJECTIVES OF THE COURSE

Further Maths is a second A Level qualification in Mathematics. It is aimed at students who intend to pursue subjects beyond the sixth form that have a high mathematical content, such as Mathematics itself, Sciences, Finance and Computing. It extends many of the concepts covered in the A Level Maths course. While it is not necessarily a prerequisite for many degree courses, it is seen as highly desirable, especially by Russell Group universities. **Students wishing to study Further Maths must also choose the single A Level Maths option but do not need to have studied the Level 2 Further Maths (or equivalent) course.**

CONTENT AND ASSESSMENT

Mathematical argument, language and proof; Problem solving; Mathematical modelling.

Pure Maths

Proof, Complex Numbers, Matrices, Further Algebra and Functions, Further Calculus, Further Vectors, Polar Coordinates, Hyperbolic Functions, Differential Equations, Trigonometry, Numerical Methods, Coordinate Geometry.

Plus, **two** applied options from:

Statistics

Discrete and Continuous Random Variables, Expectation, Poisson Distribution, Chi Tests, Exponential Distribution, Inference.

Mechanics

Dimensional Analysis, Momentum and Collisions, Work, Energy and Power, Circular Motion, Centres of Mass.

Discrete Maths

Graph Theory, Networks, Linear Programming, Critical Path Analysis, Game Theory, Group Theory.

Assessment is by **three** 2-hour written exam papers (each worth 33⅓%):
Two Pure Maths plus one applied paper.

METHODS OF STUDY

Students are taught by teacher exposition, group work, class discussion, investigation and individual research and practice.

SPECIAL FEATURES OF THE COURSE

Students wishing to study Further Maths must also choose the single A Level Maths option.

It is possible to choose Further Maths as a <u>fourth</u> option, in addition to Maths and two other subjects. You do not have to have studied the level 2 Further Maths qualification.