

A Level Further Mathematics

What is Further Mathematics?

A level Further Mathematics builds upon those skills acquired while studying Mathematics. It is, in particular, a qualification which both broadens and extends the topics covered in AS/A level Mathematics.

What sort of student does it suit and what will you get out of the course?

This course is a challenging course for those with a real interest in and aptitude for the subject. The training in logic that the course provides is appropriate to most subjects and the course supports most careers in the fields of Mathematics, Science and Engineering, Computing, Accountancy and Economics. It equips you with skills such as logistic analysis and deduction, data handling, mathematical modelling and problem solving, all of which can be applied in almost any field of work.

AS Specification : Edexcel 8372

Unit FP1:	<u>Further Pure Mathematics 1</u> Series, complex numbers, numerical solution of equations, coordinate systems, matrix algebra, proof.
Unit M2:	<u>Mechanics 2</u> Kinematics of a particle moving in a straight line or plane, centres of mass, work and energy, collisions, statics of rigid bodies.
Unit S2:	<u>Statistics 2</u> The Binomial and Poisson distributions, continuous random variables, continuous distributions, samples, hypothesis tests.

Each unit forms 16.67% of the final qualification and will consist of a 1½ hour paper. The examination of FP1 will contain approximately nine questions and the examinations of M2 and S2 will each contain approximately seven questions, all of which may be attempted.

MPW approach to AS study

The course is taught systematically, unit by unit, with much interactive discussion in our small groups. Regular homework, timed assignments and practice examination questions are all analysed in detail in lessons so that students become thoroughly familiar with the application of all the mathematical concepts involved.

Reading List

<i>Author</i>	<i>Title</i>	<i>Publisher</i>
Geoff Mannall and Michael Kenwood	Modular Maths Edexcel Further Pure Maths 1, 2 and 3	Heinemann
John Hebborn and Jean Littlewood	Modular Maths Edexcel Mechanics 2 and 3	Heinemann
Gregg Atwood, Gill Dyer & Gordon Skipworth	Modular Maths Edexcel Statistics 2 and 3	Heinemann

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A2 Specification : Edexcel 9372

Option A: Units FP2, FP3 and M3

Unit FP2: Further Pure Mathematics 2
Inequalities, series, first order differential equations, second order differential equations, further complex numbers, Maclaurin and Taylor series.

Unit FP3: Further Pure Mathematics 3
Further matrix algebra, vectors, hyperbolic functions, differentiation, integration, further coordinate systems.

Unit M3: Mechanics 3
Further kinematics, elastic strings and springs, further dynamics, motion in a circle, statics of rigid bodies.

Each unit forms 16.67% of the final qualification and will consist of a 1½ hour paper. The examinations of FP2 and FP3 will each contain approximately eight questions and the examinations of M3 and S3 will each contain approximately seven questions, all of which may be attempted.

MPW approach to A2 study

The course is followed in the same systematic way as is required at AS-level. The intellectual demands of A2 level work, however, mean that students must expect to work extremely hard. Breadth of study, depth of analysis and exam technique are crucial to achieve top grades.

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For full specification details, consult the exam boards website on www.edexcel.org.uk