

Further Mathematics

MATHEMATICS DEPARTMENT

Head of Department: Miss L Jenkins

Why choose the subject? In depth and scope, there is no limit to the interest that Further Mathematics could offer you. It is designed to broaden the mathematical experience for those where A level Mathematics is not enough! As Mathematics is such a vast subject it is impossible to cover it in one course. Hence Further Mathematics develops some of the concepts met in A level Mathematics and brings it to a higher plain and provides more opportunity to see how Mathematics is applied. Further Mathematics is a very impressive qualification to have on your CV and is not as difficult as you may expect. Many degrees, such as Engineering, Physics or Mathematics are now expecting Mathematics and Further Mathematics qualifications.

Who is eligible? This subject needs to be taken in conjunction with Mathematics. You need to have achieved a grade 8 or 9 in your Mathematics GCSE.

The course is aimed at very able mathematicians who enjoy the subject and are keen to go beyond A level Mathematics.

A LEVEL QUALIFICATION

Examination Board: Edexcel	UNIT 1	
	Description of Subject Content	Further Pure Mathematics 1 Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors
	Length of Exam	1 hour 30 minutes
	Weighting	25% of total A level mark
	Nature of Exam	Written paper
	UNIT 2	
	Description of Subject Content	Further Pure Mathematics 2 Complex numbers, Further algebra and functions, Further calculus, Polar coordinates, Hyperbolic functions, Differential equations
	Length of Exam	1 hour 30 minutes
	Weighting	25% of total A level mark
	Nature of Exam	Written paper

Examination Board: Edexcel	UNIT 3	
	Description of Subject Content	Decision Mathematics 1 Algorithms and graph theory, Algorithms on graphs, Algorithms on graphs II, Critical path analysis, Linear programming
	Length of Exam	1 hour 30 minutes
	Weighting	25% of total A level mark
	Nature of Exam	Written paper
	UNIT 4	
	Description of Subject Content	Either Further Statistics 1 Linear regression, Statistical distributions (discrete), Statistical distributions (continuous), Correlation, Hypothesis testing, Chi squared tests or Further Mechanics 1 Momentum and impulse, Collisions, Centres of mass, Work and energy, Elastic strings and springs or Decision Mathematics 2 Transportation problems, Allocation (assignment) problems, Flows in networks, Dynamic programming, Game theory, Recurrence relations, Decision analysis
	Length of Exam	1 hour 30 minutes
	Weighting	25% of total AS level mark
	Nature of Exam	Written paper

AS LEVEL QUALIFICATION

UNIT 1	
Description of Subject Content	Further Pure Mathematics 1 (FP1) Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors
Length of Exam	1 hour 30 minutes
Weighting	50% of total AS level mark
Nature of Exam	Written paper
UNIT 2	
Description of Subject Content	Decision Mathematics 1 (D1) Algorithms and graph theory, Algorithms on graphs, Algorithms on graphs II, Critical path analysis, Linear programming
Length of Exam	1 hour 30 minutes
Weighting	50% of total AS level mark
Nature of Exam	Written paper

STUDENT VIEW

Further Mathematics



Although I was initially apprehensive about studying Further Maths, I have really enjoyed it and found that I needn't have worried about being able to keep up. The different modules show you a new aspect to maths and this helps you to have a wider understanding of maths and the places it can take you. It shows you are willing to go the extra miles which is an asset to your UCAS application, especially for maths and science subjects. After studying Further Maths, I feel like it has increased my ability to cope with more complex problems and I would recommend it to anyone who loves a challenge.

RG