

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

Year 2017/2019 Advanced Level Award Examination Board: TBD	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

Year 2017/2019 Advanced Level Award Examination Board: TBD	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

Year 2017/2018 Advanced Subsidiary Award	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



I've found Further Maths to be an interesting and enjoyable subject, often more so than standard maths modules. It's more varied than standard maths and the additional modules seem more relevant and can be tailored to your specific interests and aspirations. The course is challenging, allowing you to explore complex maths and aiding confidence for all maths modules. Further Maths is increasingly sought after by universities for maths and science-based subjects and has helped me to stand out when applying for my course, as well as making me feel more prepared for studying at university. I was uncertain when I chose Further Maths A Level, particularly having not taken Further Maths GCSE, but after two years of A Levels it's my favourite subject by far and I'm so glad I chose it. I'd definitely recommend Further Maths to anyone who wants to extend their knowledge and push themselves beyond the standard maths syllabus, and those who are considering pursuing maths, science and technology subjects further. It's good for university applications, really interesting, and most importantly, great fun!

Dulcie Jackson