

FURTHER MATHEMATICS

TYPE OF QUALIFICATION	GCE AS & A level
LEVEL OF ENTRY	5 A*-C passes at GCSE (An A* grade in GCSE Maths)
METHOD OF ASSESSMENT	Exam: Year 12 and Year 13
LENGTH OF COURSE & NUMBER OF LESSONS PER CYCLE EXPECTED STUDY EXPECTATIONS	One year A2 (6 modules) and one year A2 Further (6 modules). That is, 12 modules altogether over the two years 10 Lessons per week 10 hours of directed self-study minimum, alongside set homework and revision.

COURSE STRUCTURE:

Level	Unit	Title	Grade Weighting
AS level	C 1 (Exam)	'Core Mathematics 1'	16.7% of Advanced GCE in Maths
AS level	C 2 (Exam)	'Core Mathematics 2'	16.7% of Advanced GCE in Maths
AS level	S 1 (Exam)	'Statistics 1'	16.7% of Advanced GCE in Maths
A level	C 3 (Exam)	'Core Mathematics 2'	16.7% of Advanced GCE in Maths
A Level	C 4 (Exam)	'Core Mathematics 2'	16.7% of Advanced GCE in Maths
A Level	M 1 (Exam)	'Mechanics 1'	16.7% of Advanced GCE in Maths
A Level	FP1 (Exam)	'Further Pure 1'	16.7% of Advanced GCE in Further Maths
A Level	FP2 (Exam)	Further Pure 2'	16.7% of Advanced GCE in Further Maths
A Level	FP3 (Exam)	Further Pure 3'	16.7% of Advanced GCE in Further Maths
A Level	S2 (Exam)	'Statistics 2'	16.7% of Advanced GCE in Further Maths
A Level	S3 (Exam)	'Statistics 3'	16.7% of Advanced GCE in Further Maths
AS level	D1 (Exam)	'Decision Maths 1'	16.7% of Advanced GCE in Further Maths

WHICH SKILLS WILL YOU ACQUIRE?

Pure Mathematics

- When studying pure mathematics at AS and A level you will be extending your knowledge of such topics as algebra and trigonometry as well as learning some brand new ideas such as calculus.

Mechanics

- When you study mechanics you will learn how to describe mathematically the motion of objects and how they respond to forces acting upon them, from cars in the street to satellites revolving around a planet. You will learn the technique of mathematical modelling; that is, of turning a complicated physical problem into a simpler one that can be analysed and solved using mathematical methods.

Statistics

- When you study statistics you will learn how to analyse and summarise numerical data in order to arrive at conclusions about it. You will extend the range of probability problems that you started for GCSE by using the new mathematical techniques studied on the pure mathematics course.

Decision Mathematics

- When you study decision mathematics you will learn how to solve problems involving networks. You will study a range of methods, or algorithms, which enable such problems to be tackled. Many of these problems and their algorithms are of recent origin. Ideas on this course have many important applications to such different problems as the design of circuits on microchips to the scheduling of tasks required to build a new supermarket.

WHICH CAREER PATHWAYS EXIST AFTER STUDYING THIS SUBJECT?

- Teaching
- Accounting
- Medicine
- forensic pathology
- Finance
- Business
- Consultancy
- IT
- Games development,
- Scientific research
- Programming
- Civil service
- Astrophysics
- Geology
- Dentistry
- Philosophy

WHICH SUBJECTS COMPLEMENT THIS COURSE?

Chemistry, Physics, Computer Science, Economics, Business Studies, Psychology