



Gordon's
Sixth Form

Further Mathematics

AS Level and A Level

What is Further Mathematics?

Further Mathematics is a challenging A Level qualification which both broadens and deepens the work covered in A Level Mathematics.

Who can take Further Mathematics?

Those students who are especially keen on Mathematics and are looking to study a mathematics-rich degree at university should consider taking A Level Further Mathematics. Students will need to study for the full A Level in Mathematics in Year 12 and then study the A Level in Further Mathematics in Year 13.

Which units will I study for Further Mathematics?

In Year 13 you will study 4 units. Papers 1 and 2 contain compulsory units:

- Paper 1 Core Pure Mathematics 1
- Paper 2 Core Pure Mathematics 2

Papers 3 and 4 contain optional units. Gordon's School is offering the following units:

- Paper 3 Further Mechanics 1
- Paper 4 Decision Mathematics 1

Why Study Further Mathematics?

There are many good reasons to take Further Mathematics:

- Students overwhelmingly find it to be an enjoyable, rewarding, stimulating and empowering experience.
- For someone who enjoys mathematics, it provides a challenge and a chance to explore new and/or more sophisticated mathematical concepts.
- It will deepen your knowledge and understanding of pure mathematics.
- You will be able to study a wider range of applied mathematics relevant to your future choice of degree/employment.

- It enables students to distinguish themselves as able mathematicians in the university and employment market.
- It makes the transition to a mathematics-rich university course easier.
- Some prestigious university courses will only accept students with Further Mathematics qualifications.
- You will probably end up earning more than the rest of us!

In the words of university students

"Students with Further Mathematics have less work to do. I had to learn stuff they already knew and therefore they had more time on the new topics."

"The people I know who didn't do Further Mathematics found some topics difficult because they had never seen them before and, because of the schedule at university, each topic takes only one lecture."

"Maths has always interested me, and Further Mathematics starts you thinking about it like a mathematician. Single Maths doesn't."

Any student planning to take a mathematics-rich degree (this covers a very wide range of academic areas - engineering, sciences, computing, finance, economics etc, as well as mathematics itself) will benefit enormously from taking A Level Further Mathematics.

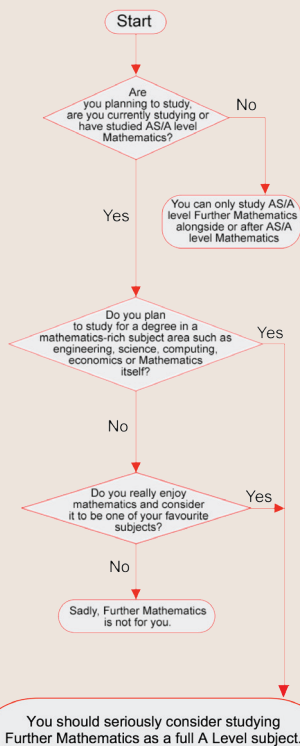
Students who are not planning to study for mathematics-rich degrees but who are keen on mathematics will find Further Mathematics a very enjoyable course and having a Further Mathematics qualification identifies students as having excellent analytical skills, whatever area they plan to study or work within.

Further Mathematics introduces students to a varied range of new topics, such as...

Compulsory units: (Further Pure Mathematics)

Complex numbers, polar coordinates, matrices, proof, differential equations, vectors, calculus and hyperbolic functions.

The flowchart below will help you to decide whether or not you should consider studying Further Mathematics.



Optional units: (Further Pure Mathematics)

Coordinate Systems, Further Vectors, Further Calculus, Further Differential Equations, Further Numerical Methods and Inequalities.

Optional units: (Statistics)

Correlation, Linear Regression, Discrete and Continuous Statistical Distributions, Hypothesis Testing, Chi Squared Tests

Optional units: (Mechanics)

Momentum and Impulse, Collisions, Centres of Mass, Work and Energy, Elastic Strings and Springs

Optional units: (Decision Mathematics)

Algorithms and Graph Theory, Algorithms on Graphs, Critical Path Analysis, Linear Programming.

A Level Further Mathematics Results 2018

Our results in 2018 were outstanding. All of our students achieved either an A* or A grade. Well done to all our students.

FAQ's

Is it possible to complete an AS Level in Further Mathematics in Year 12?

No. The 2017 A Level Mathematics specification has been revised and, as a result, we can only now offer Further Mathematics as an A Level subject in Year 13.

What GCSE Maths grade will I need to do the course?

A minimum of a grade 7, although an 8 or 9 grade is strongly recommended.

How will I be assessed?

All examinations will take place in June at the end of Year 13.

Paper 1	1½ hours	75 marks
Paper 2	1½ hours	75 marks
Paper 3	1½ hours	75 marks
Paper 4	1½ hours	75 marks

Further help

If you would like any further information about studying Further Mathematics please speak to Mr Knight or go to the following websites:

Further Mathematics Support Programme

www.furthermaths.org.uk/students

Edexcel Exam Board

<http://qualifications.pearson.com/en/qualifications/edexcel-a-levels/mathematics-2017.html>



*Gordon's School
Bagshot Road
West End
Woking
Surrey
GU24 9PT*

*www.gordons.school
01276 858084*