

# Advanced GCE in Further Mathematics

**Board:** Edexcel

**Qualification:** Advanced Level GCE in Further Mathematics

## What is the course about?

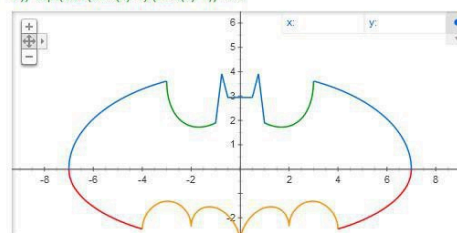
Further Mathematics enables pupils with a passion for mathematics to experience a much broader spectrum of its applications. The level of insight into pure mathematics is much deeper and we explore some interesting areas including Complex Analysis, Advanced Calculus and Matrices. There is a 50:50 split in pure and applied modules.

## Why Further Maths?

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 Further Mathematics, at least to AS level.

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. Students who have studied Further Mathematics find the transition to mathematics-rich degrees far more straightforward. Studying Further Mathematics also boosts students' performance in A-level Mathematics.

Graph for  $2^{\sqrt{-\text{abs}(\text{abs}(x)-1)} \cdot \text{abs}(3-\text{abs}(x))} \cdot ((\text{abs}(x)-1)^{3-\text{abs}(x)})^{(1+\text{abs}(\text{abs}(x)-3)/(\text{abs}(x)-3))} \cdot \sqrt{(1-x/7)^2} + (5+0.97^{\text{abs}(x-0.5)+\text{abs}(x+0.5)}) \cdot 3^{\text{abs}(x-0.75)+\text{abs}(x+0.75)})^{(1+\text{abs}(1-\text{abs}(x)))(1-\text{abs}(x))} \cdot (-3)^{\sqrt{(1-x/7)^2} \cdot \sqrt{\text{abs}(\text{abs}(x)-4)/(\text{abs}(x)-4)}} \cdot \text{abs}(x/2) \cdot 0.0913722 \cdot x^2 \cdot 3 + \sqrt{(1-\text{abs}(\text{abs}(x)-2)-1)^2} \cdot (2.71052+1.5 \cdot 0.5^{\text{abs}(x)-1.35526} \cdot \sqrt{(4-\text{abs}(x)-1)^2})) \cdot \sqrt{\text{abs}(\text{abs}(x)-1)(\text{abs}(x)-1)} + 0.9$



## Applied Modules

Statistics	Mechanics	Decision Maths
Statistics is the application of the skills acquired from GCSE Mathematics and A-Level Pure Maths to real-world problems.	Mechanics is the study of particles and their motion. Primarily focused on the Newtonian laws of motion, this course investigates motion and energies of moving bodies under gravity.	Decision maths is the contextualised study of algorithms and path analysis. The content for the module includes investigating linear programming, route inspection and critical path analysis.

## How will I be assessed?

Level	Module Title	Marks Available	Method of Assessment
AS Level	Further Pure Mathematics 1	80	100 minute examination
	Applied Module	80	100 minute examination
A Level	Further Pure Mathematics 1	75	90 minute examination
	Further Pure Mathematics 2	75	90 minute examination
	Applied Module 1	75	90 minute examination
	Applied Module 2	75	90 minute examination

AS level and A level are separate qualifications – AS level modules do not count towards the A level qualification.

## Why might this course be for me?

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 Further Mathematics, at least to AS level. Any student capable of passing A level in Mathematics should also be able to pass AS Further Mathematics. Studying Further Mathematics also consolidates and reinforces students' standard A level Mathematics work, helping them to achieve their best possible grades.

Further Mathematics qualifications are highly regarded and are strongly welcomed by universities. Students who take Further Mathematics are really demonstrating a strong commitment to their studies, as well as learning mathematics that is very useful for any maths-rich degree.