A-Level Further Mathematics Edexcel

Subject Overview

Further core mathematics

- Proof
- Complex numbers
- Matrices
- Further algebra and functions
- Further calculus
- Further vectors
- Polar coordinates
- Hyperbolic functions
- Differential equations

Further mechanics 1

- Momentum and impulse
- Work, energy and power
- Elastic strings and springs and elastic energy
- Elastic collisions in one dimension
- Elastic collisions in two dimensions

Further decision maths 1

- Elastic collisions in two dimensions
- Algorithms on graphs
- Algorithms on graphs II
- Critical path analysis
- Linear programming

Subject Information

Component /Unit/Exam paper	Weighting	Title	Details
Core Pure Mathematics 1	25% - 75 marks	Core 1	**Externally Assessed** Paper 1 may contain questions on any topics from the Core Pure Mathematics content.
Core Pure Mathematics 2	25% - 75 marks	Core 2	**Externally Assessed** Paper 2 may contain questions on any topics from the Core Pure Mathematics content.
Further Mechanics 1	25% - 75 marks	FM1	**Externally Assessed** Paper 3 will contain questions on topics based on Further Mechanics Option C.
Decision 1	25% - 75 marks	FD1	**Externally Assessed** Paper 4 will contain questions on topics based on Decision 1 Option D.

What opportunities this course could lead to:

Further Mathematics are versatile qualifications, well respected by employers and are both "facilitating" subjects* for entry to higher education. Adults with good mathematics skills and qualifications are not only well paid, but they are also often interesting and rewarding. People who have studied mathematics are in the fortunate position of having an excellent choice of career.

The reason why so many employers highly value mathematics qualifications is mathematics students become better at thinking logically and analytically. Through solving problems, you develop resilience and are able to think creatively and strategically. The writing of structured solutions, proof and justification of results help you to formulate reasoned arguments. Moreover, you will have excellent numeracy skills and the ability to process and interpret data.

For progression to many courses at university, it is important to have strong mathematics skills. For most science, technology, engineering and mathematics (STEM) degree course A level Mathematics is a requirement and AS or A level Further Mathematics is often a preferred subject. Anyone applying to study a degree in a STEM subject should consider taking Further Mathematics to at least AS level as the additional content helps ensure a successful progression to university. AS Further Mathematics is accessible to most A level Mathematics students. Having A level Further Mathematics on your university application is a way to make it stand out.

The types of courses that you can study at university include acoustic consultant, Actuarial analyst, Actuary, Chartered accountant, chartered certified accountant, Data analyst, Data scientist and Investment analyst.

Some of our former students have gone on to study courses like Medicine, engineering and economics at Russell Group universities such as Kings College London, Imperial College London, University College London and University of Warwick.

Course requirements:

The minimum Entry requirement is a Grade 8 at GCSE Mathematics and Grade 5 at GCSE English.

Useful websites:

https://www.pearsonschoolsandfecolleges.co.uk/secondary/Mathematics/16plus/16plus.aspx

https://www.examsolutions.net/as-maths/edexcel/

https://www.physicsandmathstutor.com/maths-revision/solutionbanks/