



Further Mathematics

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

If you are not planning to study for a mathematically rich degree but are keen on mathematics you will find Further Mathematics a very enjoyable course and having a Further Mathematics qualification identifies you as having excellent analytical skills, whatever area you are considering for a career.

Student Profile

A successful student will need:

6 or above in GCSE Mathematics, Applications of Mathematics or Methods of Mathematics .

At least 5 GCSE passes at 5 or above.

An enjoyment and understanding of algebraic methods of problem solving.

Resilience and an ability to cope when faced with a problem that takes several steps to solve.

Willingness to commit regular time to independent self study.

Course Content

A Level Further Mathematics is a linear qualification, with some options. It has a compulsory core pure element and a choice of two from mechanics, statistics and numerical methods:

- **Core pure** consists of polar coordinates, matrices and transformations, hyperbolic functions and differential equations.
- **Mechanics** includes Hooke's law, work, energy and power and circular motion.
- **Statistics** covers Bayes Theorem, Chi-squared tests and simulation.
- **Numerical methods** includes Newton-Raphson and Simpson's rule for solving equations.

Skills Gained

- Understanding of the mathematics that underpin many aspects of our lives.
- The ability to apply a range of mathematical skills to different situations.

The Future - What Next?

Throughout the Further Mathematics course, you are encouraged to think logically, practically and analytically. These fundamental skills are useful across all kinds of disciplines and careers. Further Mathematics is a good choice for students considering higher education in any Science or Mathematics-based course, ranging from computer, biochemical, natural or medical sciences to engineering, psychology, economics and accountancy.

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Building Your Future Together