

## Why study Mathematics?

### One – Career Opportunities

Mathematics and Further Mathematics are versatile qualifications, well-respected by employers and are both “facilitating” subjects\* for entry to higher education. Careers for men and women 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. Whilst the number of young people studying A level Mathematics and Further Mathematics is increasing there is still a huge demand from science, engineering and manufacturing employers.

### Two – Employability Skills

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. And importantly you will have excellent numeracy skills and the ability to process and interpret data.

## What will this involve?

A level Mathematics is an interesting and challenging course which extends the methods you learned at GCSE and includes optional applications of mathematics, such as Statistics, Mechanics and Decision Mathematics.

Statistics – Collecting and analysing data and using this to make predictions about future events. Many subjects make use of statistical information and techniques. An understanding of probability and risk is important in careers like insurance, medicine, engineering and the sciences.

Mechanics – Modelling and analysing the physical world around us, including the study of forces and motion. Mechanics is particular useful to students studying physics and engineering

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 mathematical skills you learn in A level Mathematics are of great benefit in other A level subjects such as physics, chemistry, biology, computing, geography, psychology, economics and business studies.

A level Further Mathematics is fun and rewarding. It broadens your mathematical skills and promotes deeper mathematical thinking. You will be introduced to interesting new areas of pure mathematics such as complex numbers and apply mathematics in a wider range of contexts.

## Where do I go from here?

A strong mathematical ability is highly regarded by employers and universities. A level Mathematics is an essential requirement for many degree courses such as Mathematics, Physics and Engineering, and is highly desirable in a wide range of Science courses, Architecture, Computing, Accounting and Economics.

These websites provide useful additional advice and information about mathematics, careers and universities courses.

[www.mathscareers.org.uk](http://www.mathscareers.org.uk)

[www.futuremorph.org](http://www.futuremorph.org)

[www.plus.maths.org](http://www.plus.maths.org)

[www.furthermaths.org.uk](http://www.furthermaths.org.uk)