

Core Maths

Pathway 2

Course description:

Core Maths is about students doing meaningful mathematical problems to increase their confidence in using mathematics to be better equipped for the mathematical demands of other courses, higher education and employment.

Core Maths is the new Level 3 qualification for students who achieved a Grade 4 (formerly a Grade C) or above at GCSE mathematics and wish to develop their practical skills so they may apply these in work, study or everyday life.

Qualifications required:

- In line with the entry requirements for a Pathway 2 subject.
- Grade 4 in GCSE Maths.

Aims of the course:

Why Core Maths?

Currently, only around 20% of students study mathematics beyond GCSE in the UK – the lowest rate in leading developed countries in the world.

According to the Higher Education STEM project, many students arrive at university with unrealistic expectations of the mathematical and statistical demands of their subjects, leading to a lack of confidence and anxiety by the students. .

Designed to maintain and develop real-life mathematics skills, what students study can be applied on a day-to-day basis whether in further study or employment. Most courses will include a financial mathematics element and can help with other A level subjects, including science, geography, business studies, economics and psychology.

The skills developed in the study of mathematics are increasingly important in the workplace and in higher education. Most students who study mathematics after GCSE improve their career choices and increase their earning potential.

Future prospects:

Will it be recognised by universities and employers?

Even though Core Maths is a new qualification, several universities have already come out in strong support of it. Employers from a range of sectors are also firmly behind the qualification. Many roles in the workplace require high levels of budget management and problem-solving skills and Core Maths will be a useful tool in equipping you with these skills.

Student feedback:

"Maths is good because you get instant feedback; it is either right or wrong!"

"It is hard to explain the satisfaction I feel when I solve a really complex problem"

Subject Teachers:

Mrs Dutt, Mr Marston, Mr Mitchell, Miss Joshi

Core Maths

Features of the course:

Core Maths has been designed to maintain and develop real-life mathematical skills. What students study is not purely theoretical or abstract; it can be applied on a day-to-day basis, whether in work, study or life.

Core Maths courses will include a financial mathematics element and can help with other A level subjects, in particular with science, geography, business studies, economics and psychology.

Mathematical skills are becoming increasingly important in the workplace and in higher education - studying Core Maths will help students to keep up these essential skills.

A Level Modules

1 - Applications of statistics

Statistics is the study of the collection, organisation, analysis, interpretation and presentation of data. It plays an increasingly important role in life, study and employment in a wide variety of contexts. It is important to be comfortable and confident in dealing with real data. It is used in areas of study such as actuarial science, biology, business and economics, IT and psychology.

2 - Probability

Probability is used to determine a numerical value for the chance or risk of events happening. Probability theory has made significant contributions to almost all branches of science and engineering over the last 100 years. Probability is used in areas of study such as finance, science, artificial intelligence, business, computer science and philosophy.

3 - Linear programming

This is a problem-solving approach to achieve the best outcome (such as maximum profit or lowest cost) through consideration of conditions that can be modelled by linear relationships.

Linear programming can be applied to a variety of contexts in business and industry. It is used most extensively in business and economics but is also utilised for some engineering problems. Linear programming models are used in industries such as transportation, energy, telecommunications and manufacturing. Linear programming has proved useful in modelling diverse types of problems in planning, routing, scheduling, task assignment and design.

4 - Sequences and growth

A mathematical understanding of sequences, growth and decay can be applied to a variety of real-life contexts and problem-solving tasks, including financial mathematics, population growth, epidemics, earthquakes and radioactive decay.

Methods of Assessment:

All assessment is in the form of external exam