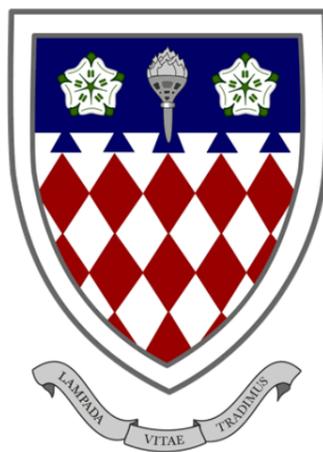


Spalding High School Sixth Form

Core Mathematics



Why Choose Core Mathematics?

Core Maths provides you with the tools and the confidence to solve problems in context; to decide upon a starting point, to evaluate your chosen method of solution, plan for error margins and come up with and adjust a mathematical model if your initial method is not successful or accurate enough.

The syllabus is not covered in the traditional way; Traditionally we have learnt a new mathematical technique or concept and then applied our learning to solve a problem. In Core Maths you are asked to solve a problem and will develop the skills required in order to do so, necessity being the mother of invention. New situations will provide you with opportunities to develop and refine new skills, enabling you to embark on a mathematical journey of self-discovery.

The course has been developed by employers, universities and professional bodies as valuable preparation for university study and employment. It is designed to be taken by students who wish to continue developing their mathematical skills without taking an A level.

It is a perfect enrichment course and would suit students wishing to study social sciences, business, psychology, sciences and health sciences, amongst many others, who are not taking AS/A level Maths. Core Maths is a useful element in preparing for university courses where a working application of maths or statistics may be required.

With UCAS points equivalent to an AS level the qualification will help with Higher Education entry and is attractive to, and endorsed by employers. Studying Core Maths provides an opportunity to develop a much greater understanding of personal finance and good understanding of statistics for an increasingly data-rich world.

What is the content of the course and how is it assessed?

What does the course involve?

There are four compulsory units:

1. Analysis of data – appreciation of the different types of data and data sources; sampling techniques; representing data numerically; representing data diagrammatically.
2. Maths for personal finance – numerical calculation techniques; working with percentages; interest rates; cost of credit; financial information represented graphically; taxation; solving financial problems including currency exchange and budgeting.
3. Estimation – the modelling cycle; Fermi estimation.
4. Critical analysis of given data and models (including spreadsheets and tabular data) – presenting logical and reasoned arguments in context; communicating mathematical approaches and solutions; analysing critically.

Further Content. We will be offering Statistical Techniques as the further content to complete this qualification. This will combine well with any other courses but particularly with Geography, Psychology and Biology.

There are three units:

Statistical Techniques – the Normal Distribution, Probabilities and Estimation and Correlation and Regression

1. The Normal Distribution – Calculating probabilities for data with a bell-shaped distribution; use of standard deviation
2. Probabilities and estimation – populations and sampling; mean of a sample; confidence intervals
3. Correlation and Regression – be able to calculate the degree of correlation between 2 variables, be able to calculate the line of best fit (regression line) between 2 variables.

Examinations

There is no coursework, just **two written papers 1 hour 30 minutes** each:

Paper 1 will assess the compulsory content (see above)

Paper 2 will assess the further content (see above)

What do our students say about A Level Further Mathematics?

'I have already used so much of what we have learned in Core Maths in Biology and Psychology and it is only 6 weeks into term.'

'It has really helped me to feel on top of my other courses.'

'Core Maths is all of the bits of maths that you are actually going to use as a grown up, seriously I can even see how algebra is used.'

'I am really enjoying using maths in a different way and keeping my skills fresh from GCSE.'

'The additional UCAS points could be a really useful top up on my overall grade profile.'

Specification

Exam Board— AQA

<http://www.aqa.org.uk/subjects/mathematics/aqa-certificate/mathematical-studies-1350>

Entry requirements

GCSE Grade 5 or above in Mathematics

For further details please contact

Miss S Chalcraft, Head of Mathematics

Spalding High School, Stonegate, Spalding, PE11 2PJ

01775 722110

enquiries@spaldinghigh.lincs.sch.uk