

POST 16 SUBJECT OVERVIEW

Name of Subject - Core Maths

Which Examination Specification is Studied for this Course? OCR Core Maths A H868

Why should I study this course? - How much money could you make if you set up a business in Worksop selling sandwiches? How much tax, national insurance and student loan will you pay when you start work? How much rubbish is produced in the UK each year? How can you use weather and temperature data of the past to predict what might happen in the future?

If you think answering questions like this quickly and easily could be useful in life (like running a business, or becoming an Engineer) then Core Maths could be the subject for you!

Who is suitable to study this course? -

This course is suitable for students with the mathematical and statistical needs of their further study of other subjects, as well as for employment and everyday life.

What GCSE Qualifications Support the Study of this Course?

Maths, Statistics, Sciences, Geography, History.

What are the Qualification Requirements for this Course?

5 passes where a pass is defined as: GCSE 9-4 or Pass or better at a level 2 BTEC

A Grade 5 or higher in GCSE Mathematics is required

How is the Course Delivered? -

One teacher for 3 hours in year 12 (examined at the end of year 12 with option to continue into year 13). If you choose to continue this course in year 13 you will have one teacher for 2 hours a week.

2 hours of independent study expected each week.

The subject is structured by projects/problems rather than by topics. Topics within our subject are covered throughout the year as several of them are covered in each of the projects that we work on.

Subject Overview		
Half Term	Year 12	Year 13
Autumn 1	Fermi Estimates: We will learn the ability to make order of magnitude estimations on problems that we do not have all the data for, but by a process of logical reasoning will be able to make surprisingly accurate estimates based only on common knowledge. This can be useful if deciding if a project is possible or not, and if a business venture is worth investigating further	Fermi Estimates: We will learn the ability to make order of magnitude estimations on problems that we do not have all the data for, but by a process of logical reasoning will be able to make surprisingly accurate estimates based only on common knowledge. This can be useful if deciding if a project is possible or not, and if a business venture is worth investigating further
Autumn 2	Big Data: Large amounts of data from phones, computers and satellites is changing our World. Data Analysts seek to understand the patterns within the data and how to use it. Many believe this job will be in very high demand from companies over the next few decades.	Big Data: Large amounts of data from phones, computers and satellites is changing our World. Data Analysts seek to understand the patterns within the data and how to use it. Many believe this job will be in very high demand from companies over the next few decades.
Spring 1	Modelling: Coming up with mathematical models that allow us to predict outcomes or give equations that explain the relationship between variables. These will include exponential growth and decay models.	Modelling: Coming up with mathematical models that allow us to predict outcomes or give equations that explain the relationship between variables. These will include exponential growth and decay models.
Spring 2	Finance: like how much a mortgage will cost you and how much tax you will pay.	Finance: like how much a mortgage will cost you and how much tax you will pay.
Summer 1	Risk: Calculating and comparing probabilities and making judgements about the effectiveness of medical tests for example.	Risk: Calculating and comparing probabilities and making judgements about the effectiveness of medical tests for example.

Summer 2	Graphs: Working with graphs and gradients and their meaning.	Graphs: Working with graphs and gradients and their meaning.
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How is the Course Assessed?

Two exams at the end of the course in year 12.

(There is an option to continue the course in year 13, and sit the exams at the end of year 13 instead)

Paper 1: Introduction to quantitative reasoning, 72 marks, 2 hours, weighting: 50%

Paper 2: Critical maths, 60 marks, 2 hours, 50% weighting.

What is our Recommended Subject Reading list to Support your Study?

Generally being up to date with the news is really helpful.

The very best thing you can do is listen to the “More or Less” podcast on BBC Sounds: <https://www.bbc.co.uk/sounds/series/p02nrss1>