



Key Stage: 5

Subject: Level 3 Mathematical studies

Aims of the subject:

The aim of this course is to enable students to engage with real-life Mathematics and it is designed to encourage students to apply mathematical principles in their studies, work and interests. It aims to help promote mathematical study beyond 16 – especially among non- mathematicians. It is particularly useful for students who wish to work in the areas of: Technology (including Engineering), Science (including Social Sciences), Economics and Business Studies but do not wish to study the more abstract Pure Maths A-Level.

At the end of this course students should have knowledge and understanding of real-life Maths and be able to apply them in an everyday context. They should also have the ability to solve substantial, open-ended problems and build on their analytical skills when critically assessing other people’s work and methodology.

This course is ideal for students who want to know more about the world outside of the classroom and how maths truly helps us understand it. The course is open-ended, to the point where, news stories at the weekend change what we could be teaching in the week.

A-Level Examination Board:

AQA Assessment Overview:

- Year 12: This course consists of 2 modules both examined at the end of Y12 (Please note this is only a one year course and therefore cannot be continued after Year 12)

Course	What will I study?	Assessment
AS	<p>Term 1:</p> <p>Paper 1 : Working with Spreadsheets, Fermi Estimation, Percentages, Interest Rates (mortgages, loans, savings etc.), Perimeter, Area, Similarity, Pythagoras' Theorem</p> <p>Paper 2a: Types of Data, collecting data, comparing data, cumulative frequency, stem and leaf diagrams, box plots, collecting and sampling data, equations of straight lines, Normal distribution</p> <p>Term 2</p> <p>Paper 1: Solutions to financial problems, Critical analysis, surface area and similarity, graphical representation, Repayments and credit, Taxation VAT.</p> <p>Paper 2a: Histograms, Correlation and lines and regression, further comparison of data using appropriate diagrams and methods, limits of accuracy.</p> <p>Term 3</p> <p>Paper 1: Taxation Income Tax and National Insurance</p> <p>Paper 2a: Probability and estimation including confidence intervals</p>	<p>Transition Pieces 1,2 and 3 (Piece 3 is an in class test)</p> <p>Paper 1 and 2a Mini Assessments</p> <p>At the end of each topic students are assessed on that topic with a homework and mini test</p> <p>Revision</p>

Enrichment opportunities

<http://www.nuffieldfoundation.org/fsmqs/fsmq-teaching-resources>

<http://www.nuffieldfoundation.org/fsmqs/and-level-use-maths-pilot-scheme-work>

www.cmosp.org.uk

Help mentor/tutor y7 students

Suggestions for wider reading

Any news article involving data, percentages or any maths whatsoever

e.g. <http://www.bbc.co.uk/news/business> http://www.bbc.co.uk/news/science_and_environment

Biology, Psychology, Sociology, History class notes and textbooks.