

Subject: Mathematical Studies 'Core Maths'

Level: Level 3 Exam Board: AQA



Course Outline

The AQA Level 3 Certificate in Mathematical Studies is a two-year, AS-level equivalent course covering compulsory content on data analysis, personal finance, estimation, and critical analysis of data, along with optional content from areas including the normal distribution, probabilities, correlation and regression, critical path analysis, graphical methods, rates of change, and exponential functions in humanities subjects. The entry requirement is a Grade 5 in GCSE Mathematics.

What will I learn on this course?

Students will learn to apply mathematical skills to real-world situations, focusing on personal finance, data analysis, and estimation. They will develop problem-solving, mathematical modeling, and critical analysis skills by studying mandatory topics including the analysis of data and estimation. Other optional units may include the normal distribution, probabilities, cost-benefit analysis, and graphical techniques. The course builds on GCSE maths, using practical examples to help students make sense of real world problems. It also supports other A-level subjects or future career pathways.

Who would be a successful student of mathematical studies?

Mathematical Studies will appeal to students who enjoy logical and numerate problem solving especially in real-life situations, have a positive attitude towards mathematics, and are enthusiastic to explore core mathematical concepts like number, algebra, statistics, and probability. In particular, the course will suit those students having:

- **A Positive Attitude:** Success comes from enjoying and engaging with the subject matter, particularly the problem-solving aspects. The course also requires a strong work ethic.
- **Mathematical Ability:** A strong foundation in GCSE mathematics (at least a Grade 5) is essential, as the qualification builds upon existing knowledge.
- **Problem-Solving Skills:** The course emphasises applying mathematical thinking to real-world contexts, making problem-solving skills crucial for success.
- **Enjoyment of Application:** Students who enjoy using mathematics to solve practical problems, such as in personal finance or data analysis, will find the course rewarding.

Career Opportunities

Career opportunities and benefits include building skills that can be applied across a range of careers and courses:

- **Versatile Skill Set:** Develops a broad range of practical mathematical skills.
- **Enhanced Problem-Solving:** Focuses on context-based problem-solving, fostering critical thinking and analytical skills crucial for various roles.

- **Access to Higher Education:** The qualification is equivalent to an AS level and offers UCAS points, facilitating entry into university programs.
- **Strong Support for Other Studies:** particularly for students taking A-Levels or BTECs in subjects including Psychology, Science, Geography, and also other technical and vocational qualifications that require strong mathematical understanding.
- **Career Progression:** Prepares individuals for higher apprenticeships, professional training, and employment opportunities in a diverse range of industry sectors.

Course Structure

Mathematical Studies is assessed by two 1 hour 30 minutes exams at the end of the course, with no coursework. It is designed for students studying alongside and in support of other A-level or post-16 courses.

The content of the course covers:

- **Personal Finance & Taxation:** A key component, encouraging students to relate mathematics to their personal experiences and future plans.
- **Statistical Analysis:** This includes topics like the normal distribution, probability, and correlation/regression.
- **Estimation & Data Analysis:** Students learn to estimate answers and critically analyze data and models, developing problem-solving skills.
- **Mathematical Modelling:** The course develops mathematical modelling, evaluating, and reasoning skills.
- **Assessment:** It consists of two 1.5-hour written examinations, each accounting for 50% of the final qualification.
- **No Coursework:** There is no coursework component for this qualification.