

# MATHEMATICAL STUDIES

## LEVEL 3

### CAREER POSSIBILITIES

The skills developed in the study of mathematics are increasingly important in the workplace and in higher education; studying Mathematical Studies will help you keep up these essential skills. Employers from all different sectors are firmly behind the Mathematical Studies' qualification. Many roles in today's workplace require high levels of budget management and problem-solving skills; Mathematical Studies will be a useful tool in equipping you with these skills.



### THE PROGRAMME

Mathematical Studies is a Level 3 qualification, equivalent to an AS level in terms of UCAS points. There are 2 examinations taken at the end of the course, with an element of pre-release material issued for both examinations.

#### Paper 1 (Compulsory Content)

**Analysis of Data** – building upon knowledge from GCSE, you will gain an appreciation of different types of data and sampling techniques. You will be required to choose effective ways to represent and analyse data, suggesting improvements where appropriate.

**Maths for Personal Finance** – arguably the most useful topic that you will study during your time in VI form, this element of the qualification will give you an understanding of how to calculate tax, National Insurance and other salary deductions. Additionally, you will learn about interest rates, loans and investments as well as savings and mortgages. You will also learn about the effects of inflation and practise budgeting for real-life scenarios.

**Estimation** – students will use Fermi estimation techniques to estimate solutions to real-life problems.

#### Paper 2 (optional modules)

All optional modules contain one element of compulsory content, Critical Analysis of Data, where students will be required to critically analyse data and suggest improvements.

**Option 1:** Statistical Techniques - students will study the normal distribution, including finding probabilities and estimating outcomes, as well as correlation and regression.

**Option 2:** Critical Path Analysis – in addition to critical path analysis, students will study expectation and cost benefit analysis.

**Option 3:** Graphical Techniques – as well as studying various graphical methods, students will also gain an understanding of rates of change and exponential functions.

### WHY STUDY THIS SUBJECT?

There has been a tremendous amount of coverage in the media about the UK's gap in basic maths skills. Only 20% of students study maths beyond GCSE in the UK – the lowest rate in leading developed countries in the world; in Japan, this figure is 85%. This puts young people in the UK at a major disadvantage in a global job market. Mathematical Studies (also known as Core Maths) has been designed to maintain and develop real-life maths skills. What you study is not purely theoretical or abstract; it can be applied on a day-to-day basis in work, study or life and most courses will include a financial maths element. It will also help with other A-level subjects – in particular with science, geography, business studies, psychology and economics.