

# CORE MATHEMATICS A Level

## Why Study this course?

- You enjoy mathematics and develop confidence in using mathematics
- You want to study a mathematics curriculum that is integrated with other areas of their study, work or interest leading to the application of mathematics in these areas
- You want to develop mathematical modelling, evaluating and reasoning skills
- You want to solve problems some of which will not be well defined and may not have a unique solution
- You want to solve substantial and real-life problems encountered by adults
- You want to use ICT as an exploratory tool for developing mathematical understanding and when solving problems
- You want to develop skills in the communication, selection, use and interpretation of mathematics

## Career Progression

- Mathematics is a versatile qualification that is well respected by employers. Careers for successful mathematicians are often well paid as well as interesting and rewarding. Being able to think analytically and developing resilience through problem solving as well as thinking strategically are a highly sought after traits in employment. Excellent numeracy skills are also very desirable to employers.
- Core Maths is about students doing meaningful mathematical problems to increase their confidence in using mathematics to be better equipped for the mathematical demands of other courses, higher education and employment.

## What You'll Study

### Year 1:

#### Paper 1

##### Analysis of data

- Data
- Collecting and sampling data
- Representing data numerically
- Representing data diagrammatically

##### Maths for Personal Finance

- Numerical calculations
- Percentages
- Interest rates
- Repayments and the cost of credit
- Graphical representation
- Taxation
- Solution to financial problems

##### Estimation

- The modelling cycle
- Fermi estimation

### Year 2:

#### Paper 2

##### Critical Path and Risk Analysis

- Critical analysis of given data and models
- Presenting logical and reasoned arguments in context
- Communicating mathematical approaches and solutions
- Analysing Critically

##### Critical path and risk analysis

- Managing multiple projects and managing timings

##### Expectation

- Calculating probabilities

##### Cost Benefit analysis

- A systematic approach to estimating the strengths and weaknesses of alternatives used to achieve the best outcomes of a decision, project or policy

