

## Mathematics [Level 3: AS / A2]

EDEXCEL

### INTRODUCTION:

Mathematics is an excellent choice for A Level studies. The course develops not only pure mathematics skills, but also the analysis and problem-solving skills which are essential in our technology-driven world.

Mathematics is a highly-regarded subject by both university and apprenticeship selection panels, as it is a good indicator of a candidate's potential. Mathematics sits equally well with all A levels. Students benefit from our small class sizes, as staff are able to offer one-to-one support if needed.

### ENTRY REQUIREMENTS / SUITABILITY:

GCSE Grade 6<sup>+</sup> in Mathematics or preferably higher.

Students need to be able to think logically and analytically to solve complex problems. They also must be driven and able to manage private study. A Level Mathematics is challenging but rewarding and best suits students who enjoy algebra.

### CONTENT:

#### Pure Mathematics

Proof, Algebra & Functions, Co-ordinate Geometry, Sequences & Series, Trigonometry, Exponentials & Logarithms, Differentiation, Integration, Numerical Methods and Vectors

#### Statistics

Statistical Sampling, Data Presentation & Interpretation, Probability, Statistical Distributions and Statistical Hypothesis Testing

#### Mechanics

Quantities & Units, Kinematics, Forces & Newton's laws and Moments

### LEADS TO:

Mathematics opens the door to many varied careers, and, as a recent survey has shown, those with Mathematics A level earn an average of 10% more than their peers. Those with Mathematics A level find themselves in a wide range of careers, including obviously all branches of engineering and science. However, there are many less obvious careers such as sports technology, nursing, actuarial and risk assessment, sound technology, armed forces officer training, brokerage and commodity dealers.

### ASSESSMENT:

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|----|---------|------------------------|---------|
| 1) | Paper 1 | Pure Mathematics 1     | 120mins |
| 2) | Paper 2 | Pure Mathematics 2     | 120mins |
| 3) | Paper 3 | Statistics & Mechanics | 120mins |