

A Level – Mathematics – Pearson/Edexcel

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Course Description

Though students of A-Level maths will encounter concepts and topics which extend far beyond that of GCSE maths, the knowledge and thinking skills developed during Key Stages 3 and 4, will prove to be extremely useful.

A-Level students study Pure Maths, Statistics and Mechanics, but at all times, must ensure that they can make reasoned mathematical arguments; solve mathematical problems and develop and use mathematical models. Pure Maths mainly extends your knowledge of such topics as algebra, trigonometry and graphical work. New concepts e.g. calculus will also be introduced. Studying Statistics allows you to summarise and analyse data effectively.

You will also study theoretical probability distributions which has wide ranging applications in other subject areas such as Biology and Geography. Mechanics includes constant acceleration formulae and Newton's Laws of Motion extending into three dimensions with the use of vectors. Projectiles and momentum are also covered.

This section is complementary to the subjects studied in A Level Physics.

Assessment

Examination Papers 1, 2 and 3 are taken at the end of the course A Level course. Each of them lasts two hours and is worth a third of the overall A Level qualification. All assessment elements are written examinations. There is no 'coursework' assessment element.

Pure Mathematics 1 (Paper 1): Proof, Algebra and functions, Coordinate geometry in the (x,y) plane, Sequences and series, Trigonometry, Exponentials and logarithms, Differentiation, Integration, Vectors.

Pure Mathematics 2 (Paper 2): Proof, Algebra and functions, Coordinate geometry in the (x,y) plane, Sequences and series, Trigonometry, Differentiation, Integration, Numerical methods.

Statistics and Mechanics (Paper 3): Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions, Statistical hypothesis testing, Quantities and units in mechanics, Kinematics, Forces and Newton's laws, Moments

Additional Entry Guidance

It is recommended that you achieve at least a Grade 5 (higher tier) in GCSE Mathematics. A grade 6 or better is the preferred standard.

This course is not suitable if you are re-sitting GCSE Mathematics.