

MATHEMATICS

HEAD OF DEPARTMENT

Mrs A Sandham

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TYPE OF QUALIFICATION

A-level

EXAM BOARD

Edexcel

SPECIFICATION

[Click here](#)

ENTRY REQUIREMENTS

Preferred: GCSE Maths grade 8

Essential: GCSE Maths grade 7



AIMS OF THE COURSE

A-level Mathematics provides students with a thorough grounding in the mathematical tools and techniques often needed in the workplace. Students will be expected to use and apply standard techniques, to reason, interpret and communicate mathematically and to solve problems within mathematics and other contexts.

The logic and reasoning skills developed by studying A Level Mathematics make sure the qualification is widely respected even in non-mathematical arenas.

COURSE OUTLINE & ASSESSMENT

Pure Mathematics (Two 2 hour papers):

Proof, Algebra and functions, Coordinate geometry in the (x,y) plane, Sequences and series, Trigonometry, Exponentials and logarithms, Differentiation, Vectors and Numerical methods.

Statistics and Mechanics (One 2 hour paper):

Statistical sampling, Data presentation and interpretation, Probability, Statistical distributions, Statistical hypothesis testing, Quantities and units in mechanics, Kinematics, Forces and Newton's laws and Moments.

CAREER PROSPECTS

Students will be likely to include mathematics as a major or minor component of university studies - either in its own right or within courses such as physics, engineering or technology. Component Mathematicians have well developed numerical skills, are good at logical thinking and have an ability to analyse difficult problems. These qualities are highly sought after and would put candidates at an advantage over similar candidates without this qualification.

SUBJECT ENRICHMENT



Something to think about...

Does mathematics need language to be understood? Is mathematics in fact its own language? Did the human race invent mathematics or was it present in nature waiting to be discovered?



Something to listen to...

'The Secrets of Mathematics' is a series of podcasts from Oxford lecturers exploring the applications of mathematics, from medicine to economics beyond. Available on iTunes.



Something to read...

Simon Singh is an author, journalist and TV producer, specialising in science and mathematics. Visit his website (www.simonsingh.net) and read his blog covering everything from The Simpsons to moonwalking with Einstein.

