

FURTHER MATHEMATICS (AS LEVEL ONLY)

HEAD OF DEPARTMENT

Mrs C Rosa
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TYPE OF QUALIFICATION

AS-level

EXAM BOARD

Edexcel

SPECIFICATION

[Click here](#)

ENTRY REQUIREMENTS

Preferred: GCSE Maths grade 9/8

Essential: GCSE Maths grade 8/7



AIMS OF THE COURSE

AS-level Further Mathematics provides students with a thorough understanding of mathematics and mathematical processes in ways that promote confidence, foster enjoyment and provide a strong foundation for progress to further study. Students are encouraged to use their mathematical knowledge to make logical and reasoned decisions in solving problems both within pure mathematics and in a variety of contexts, and communicate the mathematical rationale for these decisions clearly. Through this deeper study students will be able to apply mathematics in other fields of study and become aware of the relevance of mathematics in the world of work and to situations in society in general.

COURSE OUTLINE & ASSESSMENT

Paper 1 - Core Pure Mathematics - 1 hour and 40 minutes. The content includes topics: Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors. Paper 2 - Further Statistics 1 and Decision Mathematics 1 - 1 hour and 40 minutes. The content includes topics: Algorithms, Route Inspection, Linear Programming, Critical Path Analysis, Discrete Random Variables, Poisson Distribution, Hypothesis Testing and Chi Squared.

CAREER PROSPECTS

Students who have studied Maths/ Further Maths have an excellent choice of careers, many of which involve very well-paid professions. Maths and Further Maths are two of the Russell Group universities' 'facilitating' subjects — so-called because choosing them at A-level allows a wide range of options for degree study. Sciences such as Biology, Chemistry and Physics use many mathematical techniques, and subjects such as Geography, Psychology and Sociology are also likely to have components which will be far more easily mastered by those with prior study of Mathematics. Further Maths is also highly desirable, if not required, by many top universities for Mathematics, Science and Engineering courses, as well as Computing and Economics.

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 and 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.

