A Level - Further Mathematics

Overview:

Mathematics is a vast subject studying numbers, quantities, shape, space, their relationships, and a lot more. Further Mathematics, in turn, describes a course studied in addition to the standard A Level Mathematics. It provides deeper grounding in, and greater conceptual understanding of, both Pure and Applied Mathematics by introducing students to such topics as complex numbers, matrix algebra, differential equations, Taylor series, and others.

All these ideas are extremely important for the establishment of many scientific concepts present today and, for those passionate about Mathematics, are very interesting to learn in their own right. By the end of the course you will have taken your mathematical aptitude to a higher level and developed further your logical, numerical and problem-solving skills.

Course Progression

Further Maths is currently the fastest-growing of all subjects taught at A Level, which reflects the fact that greater knowledge of Maths often results in higher university admission chances. Studying the subject is highly recommended, and an A or A* grade strongly preferred, at such Russell Group universities as Oxbridge, Imperial, LSE and UCL.

A Mathematics degree, to which it usually leads, is highly valued by employers due to the skills in analysis, problem-solving and, of course, numeracy, that it develops.

Research shows that workers with qualifications in Maths earn substantially more than those without. Mathematicians are in demand worldwide and many other degree and career channels benefit from high mathematical aptitude. There are many opportunities that exist: medical, medical statistical, engineering, physical, business, economic, computing, technological, educational and in scientific research, IT and industry.

What Subjects combine well with Further Mathematics?

Further Mathematics combines well with most other subjects, particularly those with a significant mathematical content such as Physics, Chemistry, Economics, Accounting and ICT. Surprisingly, there are even some mathematical applications in Geography and Psychology. In a broader sense, the subject reinforces one's logical thinking skills and ability to correctly manipulate, synthesize and interpret numerical data, which is of great use in almost any area of rigorous study.
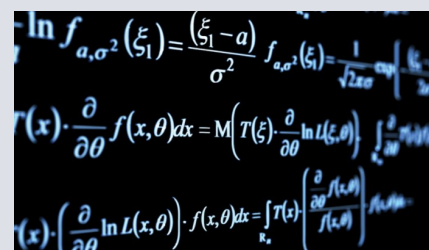
Course Leader

Mrs Streater

sstreater@cardinalnewmanschool.net

Exam Board

Pearson Edexcel

Entry Requirements

You should be a good mathematician who is expected to get an 8 or 9 at GCSE plus a range of other good grades. You should enjoy Maths as you will spend a high proportion of your time studying the subject.

Further Mathematics

Assessment Information

Further Mathematics consists of four externally-examined papers. Students must take Paper 1 and Paper 2, the two mandatory Core Pure papers, and two optional papers. Students are permitted to take more than the two optional papers if they want to extend their course of study. Students must complete all assessments in May/June in any single y

| **Paper 1: Core Pure Mathematics 1**
Paper 2: Core Pure Mathematics 2 |
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| Each paper is:
1 hour and 30 minutes written examination
25% of the qualification - 75 marks |
| Content overview - Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors, Polar coordinates, Hyperbolic functions, Differential equations |
| Assessment overview ● Paper 1 and Paper 2 may contain questions on any topics from the Pure Mathematics content. ● Students must answer all questions. ● Calculators can be used in the assessment |

Further Mathematics Optional Papers
Each paper is: 1 hour and 30 minutes written examination 50% of the qualification - 75 marks
Content overview Students take a combined paper of Decision Maths 1 and Further Mechanics 1.
Assessment overview ● Students must answer all questions. ● Calculators can be used in the assessment
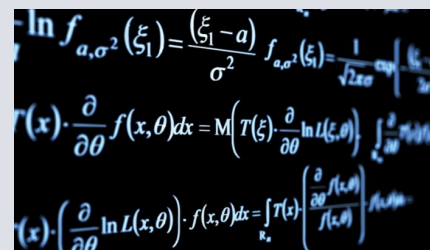
ENRICHMENT OPPORTUNITIES

We offer a large programme of enrichment activities, including a bespoke Maths library focused on A-Level msths students as well as a weekly wider reading programme.

The Senior Team Maths Challenge (STMC) takes place annually in November and early December. It provides enrichment and challenge to students in Years 12 and 13 on their mathematical, communication and teamwork skills.