A LEVEL FURTHER MATHS EXAM BOARD: EDEXCEL

SUBJECT AREA OVERVIEW
To develop an understanding of Mathematics and mathematical processes commonly used in the scientific, technological and financial worlds, and to interpret, explain, and evaluate the results of mathematical arguments in a range of different situations and to communicate this information clearly and logically.

Course Content
The aims and objectives of this qualification are to enable students to:

- understand mathematics and mathematical processes in ways that promote confidence,
- foster enjoyment and provide a strong foundation for progress to further study
- extend their range of mathematical skills and techniques
- understand coherence and progression in mathematics and how different areas of mathematics are connected
- apply mathematics in other fields of study and be aware of the relevance of mathematics to the world of work and to situations in society in general
- 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
- reason logically and recognise incorrect reasoning
- generalise mathematically
- construct mathematical proofs
- use their mathematical skills and techniques to solve challenging problems which require them to decide on the solution strategy
- recognise when mathematics can be used to analyse and solve a problem in context
- represent situations mathematically and understand the relationship between problems in context and mathematical models that may be applied to solve them
- draw diagrams and sketch graphs to help explore mathematical situations and interpret solutions
- make deductions and inferences and draw conclusions by using mathematical reasoning
- interpret solutions and communicate their interpretation effectively in the context of the problem
- read and comprehend mathematical arguments, including justifications of methods and formulae, and communicate their understanding

- read and comprehend articles concerning applications of mathematics and communicate their understanding

- use technology such as calculators and computers effectively, and recognise when such use may be inappropriate

- take increasing responsibility for their own learning and the evaluation of their own mathematical development

Assessment
Paper 1: Core Pure Mathematics 1
Paper 2: Core Pure Mathematics 2

Each paper is:
1 hour and 30 minutes written examination
Content overview:
Proof, Complex numbers, Matrices, Further algebra and functions, Further calculus, Further vectors, Polar coordinates, Hyperbolic functions, Differential equations

Paper 3: Further Mathematics Option 1*
Written examination: 1 hour and 30 minutes

Paper 4: Further Mathematics Option 2*
Written examination: 1 hour and 30 minutes

*Mathematics options include Further Pure Mathematics, Further Statistics, Further Mechanics and Decision Mathematics. Different combinations of options allow Further Mathematics to support different university progression routes.

Career Paths and Related Subject Areas
Maths is a highly respected A-Level and is useful to study degrees such as aerospace, civil engineering, computer engineering, computer game designing, electronic engineering, finance and banking, management, mechanical engineering, pharmacology, physics, software development, web design, and many more.

For further information:
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