



NOTTINGHAM GIRLS' HIGH SCHOOL

GDST
GIRLS' DAY SCHOOL TRUST

SIXTH FORM CURRICULUM GUIDE

MATHEMATICS

EDEXCEL

ENTRY REQUIREMENTS

At least grade 7 in GCSE Mathematics.



In today's rapidly evolving digital world, Mathematics qualifications are highly regarded. Mathematics skills are not only good training for the mind, helping to develop analytical and logical thinking, but they are also used as a tool in many other fields of work, such as medicine, engineering, psychology, computing and natural sciences. Students with Mathematics qualifications not only appreciate the beauty of the subject but are also highly employable.

Did you know...

- Quadratic equations and probability can be linked to football?
- Trigonometry can be linked to combating terrorism?
- Complex numbers involving the square root of -1 , are used routinely by engineers?
- Companies evaluate risky research and development projects using probability?

Mathematical models are also used to help address ethical issues, such as should a developing country try to protect its domestic industries from foreign competition? Economists use statistical techniques to test how well models like these explain, and ultimately predict, what happens in an economy. Mathematics is an integral part of the world we live in.

THE A LEVEL COURSE

Paper 1: Pure Mathematics 1

Paper 2: Pure Mathematics 2

Each paper is a 2 hour written examination 33.33% of the qualification

Topics included are: Proof, algebra and functions, coordinate geometry in the (x, y) plane, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, numerical methods and vectors

Paper 1 and Paper 2 may contain questions on any topics from the Pure Mathematics

Paper 3: Statistics and Mechanics

2 hour written examination 33.33% of the qualification

Section A: Statistics - Topics included are; Statistical sampling, data presentations and interpretation, Probability, Statistical distributions, Statistical hypothesis testing.

Section B: Mechanics - Topics included are; Quantities and units in mechanics, Kinematics, Forces and Newton's laws, Moments.

Paper 3 will contain questions on topics from the Statistics content in Section A and Mechanics content in Section B. Students must answer all questions.

FURTHER MATHEMATICS

EDEXCEL

ENTRY REQUIREMENTS

At least grade 8 in GCSE Mathematics.



FURTHER MATHEMATICS

If you are considering a degree in Mathematics, Economics, Engineering or Science and thoroughly enjoy the sophistication and challenge of the subject then Further Mathematics A Level is the ideal choice. It is an extremely rewarding choice for the student who loves Mathematics and is stimulated by the somewhat faster pace and greater depth. It is also an entry requirement for most Mathematics related degrees. The two year course covers the same ground as our single Mathematics course, but takes ideas further and there are also a number of interesting extra topics, such as complex numbers, matrices and hyperbolic functions.

Further Mathematics consists of four papers.

Paper 1: Core Pure Mathematics 1

Paper 2: Core Pure Mathematics 2

Paper 3: Further Mathematics Option 1

Students take one of the following four options: Further Pure Mathematics 1, Further Statistics 1, Further Mechanics 1 or Decision Mathematics 1

Paper 4: Further Mathematics Option 2

Students take one of the following seven options: Further Pure Mathematics 2, Further Statistics 1, Further Mechanics 1, Decision Mathematics 1, Further Statistics 2, Further Mechanics 2 or Decision Mathematics 2

Each paper is:

1 hour and 30 minutes written examination

25% of the qualification

"Small minds discuss people. Average minds discuss events. Great minds discuss ideas. Really great minds discuss Mathematics."

Anon

*Click here to watch the course introductory video
from Head of Maths, Miss Rhianna Spray*

In order to join us in the Sixth Form, we require an average of grade 6 across eight GCSE subjects, including English and Mathematics. See individual subjects for any specific requirements for study at A Level.

For detailed course information on all of the A Level subjects please visit the AQA, Edexcel or OCR websites.

If you have any questions about any aspect of the admissions process, please call 0115 935 4444 or email admissions@not.gdst.net



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