MATHEMATICS

Gordon's Sixth Form

AS AND A LEVEL

So you think you want to study Mathematics beyond GCSE...

Ask yourself the following questions:

- Do I enjoy Mathematics?
- Is Mathematics my best subject?
- Do I thrive on a challenge?
- Do I need an A Level in Mathematics for my chosen career or University course?
- Do I want to increase my earning power?

If the answer to these questions is YES, then read on...

The Specification

The specification for A Level Mathematics aims to encourage students to:

- Develop their understanding of mathematics and mathematical processes.
- Develop their ability to reason logically, to generalise and to construct mathematical proofs.
- Use mathematics as an effective means of communication.

What subjects will I study?

Pure Mathematics is concerned with algebra and functions, coordinate geometry, sequences and series, trigonometry, exponentials and logarithms, calculus and vectors.

Statistics is the study of probability and the presentation and analysis of data.

Mechanics applies mathematics to kinematics, statics and dynamics.

The course available to students is:

AS and A Level Mathematics

Students will study three units:
Paper 1 Pure Mathematics 1
Paper 2 Pure Mathematics 2
Paper 3 Statistics and Mechanics

Further Mathematics

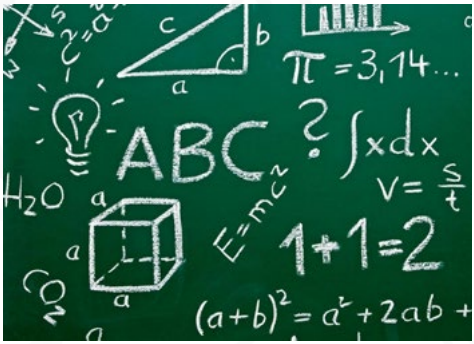
We are able to offer this to our most able Mathematics students. Students choosing this option will complete A Levels in both Mathematics and Further Mathematics.

See our separate leaflet for further details.

At Gordon's School we have a knowledgeable and committed team of teachers who have a wide range of experience both in the teaching of Mathematics as well as in its application in industry.

Careers

In virtually all areas of science, industry and commerce Mathematics plays a key role. If you are thinking of pursuing a career in professions as diverse as accountancy, engineering, architecture, medicine or IT, then an AS or A Level in Mathematics will be invaluable.



Mathematics Degrees

Subjects to study at A Level:

Entry requirements for Mathematic degrees usually only emphasise an academic background in Mathematics. Applicants may be required to have studied some or all of the following: Further Mathematics, Pure Mathematics, Mechanics and complex numbers.

Experience of studying other scientific subjects may also be welcomed, and can help provide an additional dimension to your studies. Some universities in the UK (such as Cambridge and Warwick) require students to take the Sixth Term Examination Papers (known as the STEP exam) or the Advanced Extension Award (AEA).

Mathematics Careers

- Actuary
- Financial analyst
- Statistician
- Meteorologist
- Engineer
- Accountant
- Insurance underwriter
- Banking
- Stockbroker
- Economist

Mathematics degrees have an excellent reputation and are very popular amongst employers because graduates are numerate and logical with good problem solving skills.

Celebrities who have studied Mathematics

Carol Vorderman, Rachel Riley, Dara O'Briain, Dave Gorman, Jonny Buckland (Coldplay), Brian May, Virginia Wade, Glen Johnson

Frequently Asked Questions

What GCSE Maths grade will I need to do the course?

A minimum of a grade 7. The A Level course is rewarding, but challenging.

Which exam board syllabus do you follow?

Edexcel.

How will I be assessed?

Year 13 A Level		
Paper 1	*2 hours*	*100 marks*
Paper 2	*2 hours*	*100 marks*
Paper 3	*2 hour*	*100 marks*

When are the exams?

Examinations will take place at the end of Year 13.

If you need any further information, please contact:

Mr Mark Eaden,
Head of Mathematics at Gordon's School

MATHEMATICS

HEAD OF DEPARTMENT
Mr M Eaden
meaden@gordons.school

HEAD OF KS5 MATHEMATICS
Mrs H Kellwood
hkellwood@gordons.school

Exam Board
Edexcel

Specification
A Level Mathematics 9MA0

COURSE DETAILS

Examination

The course is examined in Year 13.

Pure Mathematics and Applied Mathematics:

Students will study elements of **Pure Mathematics** including proof, algebraic methods, coordinate geometry, functions and graphs, trigonometry, sequences and series, exponentials and logarithms, differentiation, integration, parametric equations, numerical methods and vectors, elements of **Statistics** including statistical sampling, data presentation and interpretation, probability, statistical distributions and statistical hypothesis testing and elements of **Mechanics** including quantities and units, kinematics, forces and Newton's laws, projectiles and moments).

All students must sit three exams at the end of Year 13.

HOW WILL I BE ASSESSED?

A Level Exams	% of GCE	Details
Paper 1: Pure Mathematics 1	**33.3%**	Written examination: 2 hours, 100 marks
Paper 2: Pure Mathematics 2	**33.3%**	Written examination: 2 hours, 100 marks
Paper 3: Statistics and Mechanics	**33.3%**	Written examination: 2 hours, 100 marks

WIDER READING

- A Mathematician's Apology by G.H. Hardy (CUP, 1992)
- Fermat's Last Theorem by Simon Singh
- The Music of the Primes by Marcus du Sautoy (Harper-Collins, 2003)

GOR
SEMPER

DON
FIDELIS

Gordon's School
West End, Woking
Surrey, GU24 9PT

www.gordons.school
01276 858084