



## Course Overview:

A level Mathematics underpins your learning of the sciences, medicine, humanities, economics, engineering... In fact Mathematics opens doors to whole new spheres of study and commerce. So go on take the **challenge!**

## Topics covered

A level Mathematics lasts two years, with exams at the end of the second year. The table below shows what you'll learn in each course.

### TEACHERS SAY...

*Mathematics is a fantastic course to stimulate your analytical skills. It is exciting and challenging and opens a wealth of opportunities for higher education.*

### YOUR NOTES

First year of A level	Second year of A level
The course covers the overarching themes of mathematical argument, language and proof, mathematical problem solving and mathematical modelling.	
Pure Maths including proof, algebra and functions, coordinate geometry, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, vectors	The Pure Maths topics from the first year are studied in more depth. In addition numerical methods are studied.
Statistical sampling, data presentation and interpretation, probability, statistical distributions, statistical hypothesis testing	The Statistics topics from the first year are studied in more depth over the 2 years.
Quantities and units in mechanics, kinematics, forces and newton's laws	The Mechanics topics from the first year are studied in more depth. In addition moments are studied

## A level Mathematics

### Examination Board:



### Teacher contact:

**Miss C Dolan or Mr S Paul**  
[spaul or cdolan@chichesterfreeschool.org.uk](mailto:spaul or cdolan@chichesterfreeschool.org.uk)

**Entry requirements:** Minimum of Grade 7 in Maths or 6 in Maths plus passing the CFS algebra skills test.

### Type of Assessment:

There are three exams at the end of the two years for A level, all of which are two hours long: Paper 1—Pure Maths, Paper 2—Pure and Mechanics, Paper 3—Pure and Statistics. The AS has two exams at the end of the year. Both are 1 hour 30 minutes long: Paper 1—Pure and Mechanics, Paper 2—Pure and Statistics.

**This course goes well with:**  
 Sciences and Social Sciences

### Possible degree options

According to bestcourse4me.com, the top six degree courses taken by students who have an A level in Mathematics are:

- Mathematics
- Accounting
- Economics
- Mechanical Engineering
- Physics
- Computer Science

## What can I do now to help me prepare for my course?

Mathematics is an academically challenging course and most students do find the start of their A level study demanding. The key to success is, as ever, good preparation. How can you prepare? You need to be comfortable with the basic mathematics from your GCSE course, most importantly: 'Elements of Algebra, 'Quadratic Formulae & Graphs', 'Sine & Cosine Rules, 'Statistical Interpretations & Applications', 'Surds' and 'Vectors'. You should also take time to a look at these websites (particularly Further Maths Support Programme).

<http://furthermaths.org.uk/integral>

The best A level site very thorough , with lots of explanation videos

<https://www.examsolutions.net/>

Tutorials & past papers essential basics for AS Level & A level Students

<https://mrbartonmaths.com/students/a-level/>

Excellent revision material for all levels 'Vidoes, resources previous exam papers

<https://studywise.co.uk/a-level-revision/maths/>

Useful sources of nice videos and explanations, resources and previous exam papers

<http://www.physicsandmathstutor.com/maths-revision/a-level-core-1/>

Excellent revision source for both A level and Physics

<https://www.teachitmaths.co.uk/>

Part of the AQA suite of resources to support GCSE & A level students, Interactive resources

### Literacy, when you...

..read around the subject, and use several sources of Information to answer problems.

### Numeracy, when you...

..analyse data, draw graphs and calculate answers

### ICT, when you...

..research current theories, create presentations and complete assignments.

## Possible Career options:

Studying an A level Mathematics related degree at university gives you all sorts of exciting career options, including:

Mathematician

Nuclear physicist / engineer

Mechanical / production engineer

Electrical / electronics engineer

Civil engineer

Pilot

Doctor

Economist

Retail management

Patent attorney

University / college lecturer

Secondary school teacher.

Chartered certified accountant

Environmental consultant