

# Mathematics A-Level at Bryn Hafren

Accredited by the WJEC this course provides pupils with all the essential tools necessary for a sixth form mathematician and is good preparation for anyone wishing to study mathematics, or any subject with a mathematical content beyond A-Level.

Mathematics is studied in the sixth form for many different reasons: some study it simply because they enjoy tackling problems of a numerical or logical nature whilst others study it because it provides an important means for describing Scientific, Economic or Geographic phenomena.

Mathematics at AS / A2 level at Bryn Hafren has a history of achieving excellent results, so even if you do not intend to study mathematics post A-level it can provide you with a highly respected qualification for a university course with less mathematical content. It is a useful subject for careers in Computing, Accountancy, Economics, Business, Finance, Retail Management, Architecture, Sports Science, Medicine, Psychology and, of course, Teaching to name but a few.

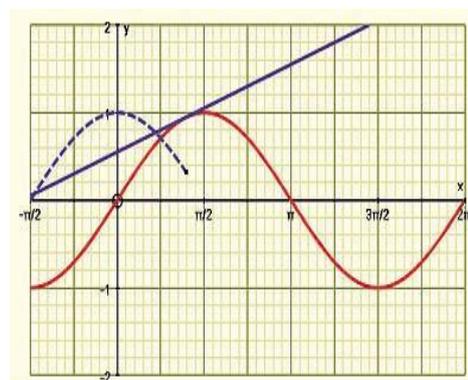
## What will I study?

**AS Mathematics.** The AS examination consists of three modules; C1, C2 and S1 taken over one year.

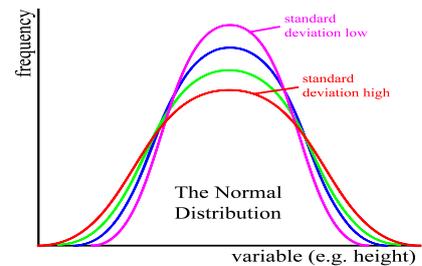
**A2 Mathematics.** The A level examination consists of six modules; C1, C2, C3, C4, S1 and M1 taken over two years.

### The Core Modules

**C1, C2, C3, and C4** introduce the basic techniques or methods of advanced mathematics. They extend the algebra and geometry that you have met at GCSE and introduce a new topic called Calculus which introduces efficient ways of calculating the gradient of curves and the area under curves.



**The Statistics Module S1**, (Year 12) Uses mathematical ideas to summarise large amounts of data and make valid inferences or deductions from information gathered from relatively small samples. The concepts of these modules are of great use in the study of Geography and Biological Sciences



**The Mechanics Module M1** (Year13) Uses mathematical techniques to investigate the relationships between the forces acting on a body and the way that the body moves. There is considerable overlap with the concepts of Physics.

Each module is assessed via external examination of duration 1½ hours. Modules can be taken in January and June of each year.

We recommend that you have a minimum of grade B at GCSE to undertake an AS or A level in mathematics.

### **Will it be useful when I am older?**

Employers and Universities who see that you have a qualification in Mathematics know that you have:

- Developed abilities to reason logically and recognise incorrect reasoning.
- Acquired skills to use technology such as calculators and computers effectively, recognise when such use may be inappropriate and be aware of limitations.
- Recognised the relevance of Mathematics to other fields of study, in the world of work and to society in general.
- Taken responsibility for your own learning.
- Extended your range of problem solving techniques.
- Recognised how a situation may be represented mathematically and understand the relationship between “real world” problems and standard and other mathematical models and how these can be refined and improved.

Mathematics enables you to land on the moon, make films such as Avatar and have a mobile phone. Having AS or A level mathematics will increase your value to an employer in the future.

A report in the Times stated that “young people with A level Mathematics **earn 10 per cent** more than their mathematically challenged counterparts”.