

# Mathematics

(A level)

## Overview

The Mathematics Department is staffed by well qualified and experienced teachers in Mathematics who use a variety of teaching methods to support your learning. The course builds upon students' previous experience of Mathematics, developing some topics further and introducing many new topics. Students are expected to undertake 5 hours of work away from the classroom each week.

You will be expected to purchase a graphical calculator (Casio Graphics Calculator FX-9750GII) for use on the course and some work will be done using computers.

## Course Outline

### Year 12

You will cover the essential pure mathematical methods that can be applied to real world scenarios. Topics include solving equations, graphs and transformations, coordinate geometry, logarithms and exponentials, trigonometry, and differentiation and integration.

You will also study some mechanics in the form of kinematics, forces and Newton's Laws as well as some statistics including probability theory and hypothesis testing.

### Year 13

The work in pure mathematics is extended to include topics such as sequences and series, functions, numerical methods and 3D vectors.

There will also be more material in mechanics such as the resolution of forces, moments and the study of friction.

In statistics more advanced probability theory will be covered and you will investigate statistical distributions such as the Normal Distribution.

## Assessment

No Coursework

Examination (100%)

Examining Board – AQA.

## Special Entry Requirements

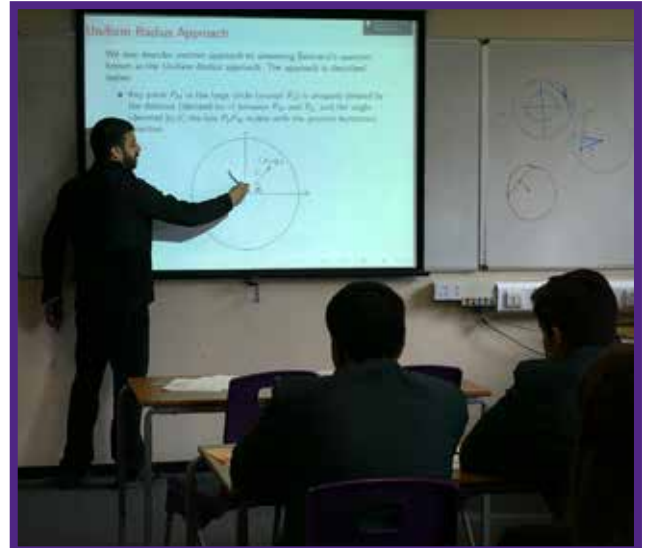
Minimum grade 6 or B or above in GCSE Mathematics. In addition, standard A level entry requirements apply - see [www.solihullsfsc.ac.uk/courses/entry-requirements](http://www.solihullsfsc.ac.uk/courses/entry-requirements).

## Prohibited Options

Statistics.

## Career and Progression Opportunities

There is a shortage of people with strong mathematical skills. Mathematics is a common part of degree courses such as Business and Finance, Architecture, Chemistry, Biology, Psychology, Management Science and Computing. Mathematics is essential for courses such as Engineering, Physics, Economics and Mathematics itself. Mathematics A level keeps many doors open and is valuable for almost every future career plan except specialised options.



## Examination Results

In the past three years, there has been great success for students on this course. The full breakdown of results is as follows:

Year	Entry	A*	A	B	C	D	E	U	A-E%
2016	193	20	36	55	32	29	17	4	97.9%
2017	225	12	31	45	48	40	36	13	94.2%
2018	219	11	42	57	43	35	17	14	93.6%

## Case Study

Among the recent successful students to have taken this course is **Callum Gibson**.

He came to the College from Smith's Wood Academy to study A levels. He was an outstanding student and achieved A\* grades in Mathematics, Further Maths and Chemistry and an A in Physics.

He has progressed to the University of Warwick to continue his Mathematics studies.



## Mathematics Department Staff

Scott Fisher (Curriculum Leader)  
Margot Cooper (Assistant Curriculum Leader)  
Isabel Cooper, Helen Cameron, Shella Haq,  
Jacob Howe, Joseph Kimani, Paul Phillips,  
Adam Prince, Alan Skipper



## Contact

Address: The Sixth Form College, Solihull  
Widney Manor Road, Solihull  
West Midlands B91 3WR

Tel: 0121 704 2581  
Fax: 0121 711 1598  
Email: [admissions@solihullsfca.ac.uk](mailto:admissions@solihullsfca.ac.uk)  
Web: [www.solihullsfca.ac.uk](http://www.solihullsfca.ac.uk)