

MATHS

A LEVEL COURSE DESCRIPTION

Mathematics is not only intriguing but also immensely rewarding. Students are drawn to its challenges, the clarity it offers, and the definitive nature of its solutions. Solving a mathematical problem brings a unique sense of excitement and fulfilment, all of which you will experience in A Level Mathematics.

It is important to recognise the broader significance of Mathematics and its rapid advancements in various fields. Mathematics revolves around identifying patterns and structures; it involves logical reasoning, deduction, and calculations within these frameworks. When patterns emerge—often across diverse areas of science and technology—the mathematical principles governing them can be harnessed to explain and influence natural phenomena and circumstances. The impact of Mathematics on our daily lives is profound, significantly contributing to the prosperity of our society.

The A Level Mathematics curriculum encompasses the study of Pure Mathematics alongside the application of Mathematics to real-world scenarios, including Mechanics, which explores the movement and behaviour of physical objects, and Statistics, which focuses on understanding and interpreting data.

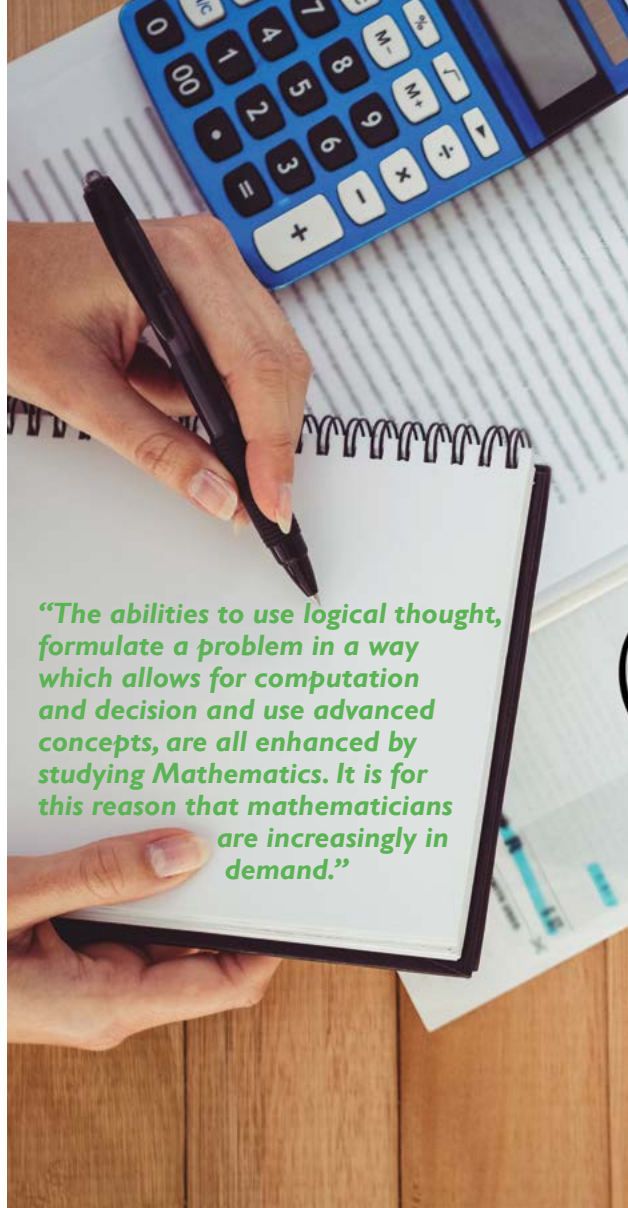
Students will follow the Edexcel linear course for AS/A Level Mathematics, providing a comprehensive foundation for further study and diverse career opportunities.



Progression

Students who pursue A-Level Mathematics are in a privileged position, enjoying a diverse array of university and career options. With an A-Level in Mathematics, you will find yourself well-prepared for degrees in mathematics, finance, statistics, engineering, computing, teaching, and accountancy—opportunities that may not be as readily available to students from other disciplines. This adaptability is particularly crucial in today's landscape, where uncertainty persists about which fields will offer the best employment prospects in the years to come. Recent surveys indicate that graduates in Mathematics and Computer Science are among the highest earners six years after graduation. Mathematics is also regarded as one of the core sciences, making it a popular choice for students considering a future in medicine, often studied alongside Chemistry, Physics, and Biology. Alumni from St Angela's Sixth Form have successfully progressed to study Mathematics and related subjects at prestigious institutions, including Oxford, Cambridge, UCL, LSE, King's College London, and Warwick.





“The abilities to use logical thought, formulate a problem in a way which allows for computation and decision and use advanced concepts, are all enhanced by studying Mathematics. It is for this reason that mathematicians are increasingly in demand.”

FURTHER MATHEMATICS

In this sixth form centre it is possible to study for either an AS or A level in Further Mathematics. Further Mathematics is a subject which allows you to develop your mathematical knowledge and skills and be able to apply them in a wider context. It is particularly relevant for those who wish to study mathematically rigorous degrees like Engineering, Physics and, of course, Mathematics.

ENTRY REQUIREMENTS

Mathematics

Students must achieve at least a grade 7 or above in GCSE Mathematics.

Further Mathematics

Students must have at least a grade 8 in GCSE Maths.

ASSESSMENT

Students will sit examinations at the end of Year 12 to achieve an AS Level award. They will then sit examinations at the end of Year 13 to achieve the A Level award. The examinations sat to achieve the AS Level award will not count towards achieving the A Level award. The final examinations take the following structure:

MATHEMATICS

AS Level:

Pure Mathematics 1
Statistics and Mechanics

A Level:

Pure Mathematics 1
Pure Mathematics 2
Statistics and Mechanics

FURTHER MATHEMATICS

AS Level:

Core Pure
Mathematics 1

Further Pure 1

Further Mechanics 1

A Level:

Core Pure Mathematics 1

Core Pure Mathematics 2

Further Pure 1

Further Mechanics 1

Internal assessments take place regularly and students' progress is monitored rigorously. These assessments are in the form of tests, mock examinations, written homework tasks and online tasks.

Tests will be set every couple of weeks and will be focussed on the topics which you would have just studied. The assessments are always based on past AS and A level examination questions to give you an idea of what to expect in the final external.

DEPARTMENTAL ENRICHMENT AND STUDENT SUPPORT

Students are offered enrichment opportunities and support throughout the duration of the course.

- UKMT Senior Maths Challenge
- Saturday Maths classes at universities
- Mentoring/tutoring younger pupils
- After school and holiday revision classes

Routes for Success - Business and Economics OR Sciences

The Routes to Success Programme is designed for ALL students in Year 12 at St Angela's Ursuline 6th Form. The BUSINESS AND ECONOMICS OR SCIENCES programme aims to offer students opportunities to work with both industry and universities, opportunities will include links with; BUSINESS & ECONOMICS ROUTE: London Metals Exchange, Royal Bank of Canada, Credit

Suisse and UCL. Summer school opportunities will include links with; UCL, London Met and Leicester University and Deloitte. SCIENCES ROUTE: London Hospital, Institute of Civil Engineers, Sutton Trust, Kings' College London, Barts and Royal London and Imperial. Summer school opportunities will include links with; City Medicine, City Nursing, Chrysalis, Surrey Science, Queen Mary

Engineering and Warwick Medicine.

Please note- All Year 12 students will select one main 'Route for Success' from these in order to experience a specialist enrichment and learning support programme. It will, of course, be possible to select a subject/subjects from another route on your timetable. We base our Routes to Success Programme on the university curriculum structure and university links are not exclusive to one route, so can be accessed by all students.

