



Maths and Further Maths

A level Maths Qualification

- This is a two-year, linear full A Level with three examinations at the end of the two years.
- There are two examinations on Pure Mathematics and one on Statistics & Mechanics (each paper is 2 hours duration)

A level Further Maths Qualification

- This is a two-year, linear full A Level with four examinations at the end of the two years.
- There are two examinations on Core Mathematics and one each on Further Mechanics & Decision Mathematics (each paper is 1 hour and 30 minutes duration)

Meet the Department

Mr Nangalia: Maths & Further Maths

Mrs Wilkes: Maths & Further Maths

Mr Webster: Maths & Further Maths

Miss Bobek: Maths

Typical Lesson

- There are 9 lessons per fortnight in Mathematics
- In ordinary Maths you will study Pure Mathematics, Statistics & Mechanics
- In Further Maths you will study Core Mathematics, Further Statistics & Decision Maths
- Regular chapter assessments testing key skills
- Textbooks for each student
- Homework booklets
- A department with plenty of experience in teaching A level Mathematics



What you will study

A-Level Mathematics

Pure Mathematics

- Topic 1 – Proof
- Topic 2 – Algebra and functions
- Topic 3 – Coordinate geometry in the (x, y) plane
- Topic 4 – Sequences and series
- Topic 5 – Trigonometry
- Topic 6 – Exponentials and logarithms
- Topic 7 – Differentiation
- Topic 8 – Integration
- Topic 9 – Numerical methods
- Topic 10 – Vectors

Statistics

- Topic 1 – Statistical sampling
- Topic 2 – Data presentation and interpretation
- Topic 3 – Probability
- Topic 4 – Statistical distributions
- Topic 5 – Statistical hypothesis testing

Mechanics

- Topic 6 – Quantities and units in mechanics
- Topic 7 – Kinematics
- Topic 8 – Forces and Newton's laws
- Topic 9 – Moments

What you will study

A-Level Further Mathematics

Core Mathematics

Topic 1 – Proof
Topic 2 – Complex numbers
Topic 3 – Matrices
Topic 4 – Further Algebra and functions
Topic 5 – Further calculus
Topic 6 – Further vectors
Topic 7 – Polar coordinates
Topic 8 – Hyperbolic functions
Topic 9 – Differential equations

Applied modules

- *Decision Mathematics*
- *Further Mechanics*

Subject Combinations

Mathematics and Further Mathematics are both facilitating subjects which can go alongside any subject.

They often complement the sciences and subjects which require mathematical techniques such as psychology and computer science.

Careers

- Accountancy
- Aerodynamicist
- Air Traffic Controller
- Architect
- Business
- Cartographer
- Civil Engineering
- Computer Scientist
- Consultancy
- Construction
- Cosmologist
- Data Analyst
- Design
- Dietician
- Doctor
- Economist
- Finance
- Fluid Dynamist
- Forensic Pathology
- Games Development
- Geneticist
- Information Security
- Information Technology
- Lawyer
- Logistics
- Management Consultant
- Mathematician
- Mechanical Engineering
- Medicine
- Merchant Banker
- Meteorologist
- Ministry of Defence
- Numerical Analyst
- Oil Refinery Engineer
- Physicist
- Programming
- Royal Navy Officer
- Sports Scientist
- Statistician
- Teaching



What do our current students think?

I love studying maths and further maths A-level because it's worked wonders building my problem-solving skills. Each lesson poses a new challenge, and the feeling of overcoming it by the end of each lesson - plus learning something new - always feels really satisfying. Further maths has helped me develop a much deeper understanding of the work I do in maths, and the smaller class size means that I'm very close with my peers and always have them to discuss the work with. If ever you need help from a teacher, it's always available both in-person and over email.

Year 13 leaver.



What do our current students think?

For most students who study mathematics, studying advanced mathematics is a good choice. Not only will it make learning math easier, but it will also strengthen your understanding of numbers. The small size of the class allows the teacher to answer the students' questions in a timely manner and to have a better understanding of the students' learning level. If you're an introvert, this is a huge plus.

Year 13 leaver.



What do our current students think?

Personally, I have always taken an interest in maths from a young age and therefore it was a no-brainer for me to choose maths at A-Level. It allows you to really feel like you're broadening your academic knowledge and the excellent resources and help provided by the teachers aids massively in learning this new content. I would strongly suggest taking A-level maths as it complements a lot of other A-Levels very well and has not closed doors to many career paths.

Year 13 leaver.



What do our current students think?

I really enjoy taking Maths at King Charles because it helps me effectively practice my problem-solving skills, allowing me to develop my analytical thinking and reasoning. The teachers always help us understand the questions, whilst challenging us, and the small class size ensures we all have a full grasp on the topic.

Current student



All of the King Charles I Open Evening resources can be found by visiting the [school website](#)



We look forward to welcoming you to our classrooms in September 2026