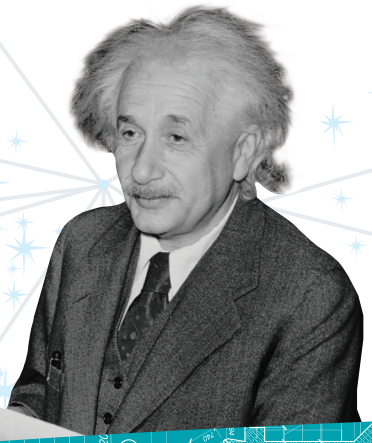
Abbey Gate College
Sixth Form

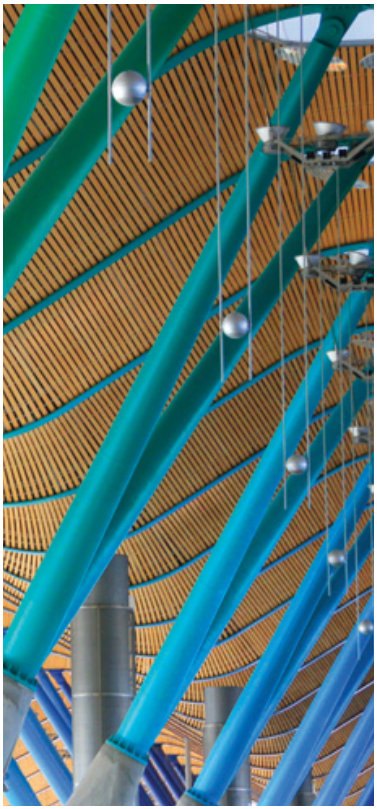


Further Mathematics

Why study Further Mathematics at A Level?

Further Mathematics is widely recognised by university departments in the sciences, engineering, computing and mathematics, the so called STEM subjects, as one of the most demanding and useful AS/A Level subjects. Taking Further Mathematics is a great way for students to show that they have that something extra.

Charlie Stripp (Leader of the Further Mathematics Support Programme)



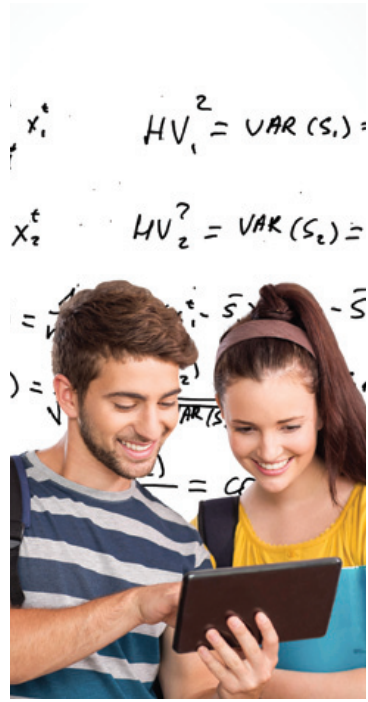
Course Content

Further Mathematics:

Edexcel A-Level Further Mathematics course comprises of one compulsory unit and two options.

- Core Pure - complex numbers, matrices, series, algebra and functions, proof, vectors and calculus, hyperbolic functions, polar coordinates, differential equations

- Options
  - Further Pure - Further trigonometry, further calculus, further differentiation equations, coordinate systems, group theory, 3D matrices and number theory
  - Further Mechanics - momentum and impulse, energy and power, elastic string problems, collisions, circular motion, centre of mass, simple harmonic motion
  - Further Statistics - discrete probability distributions, Poisson & binomial distributions, geometric distributions, central limit theorem, continuous random variables, chi-squared test
  - Decision Maths - algorithms and networks, graph theory, critical path analysis, network flow, dynamic programming and game theory



The options are chosen at the beginning of the course to best match the strengths and future pathways of the students.

AS-Level Further Mathematics

AS-Level Further Mathematics is a stand-alone qualification that is achieved at the end of Lower Sixth. It consists of AS Core Pure and the same options available in A-Level Further Mathematics.

A-Level Further Mathematics is delivered so all students can achieve an AS-Level at the end of Lower Sixth.

SKILLS obtained by studying Further Mathematics:

Employers know that a Further Mathematician will be an asset to their company, bringing with them excellent problem solving ability and powers of analysis. Further Mathematics students will develop a more independent style of learning; ideal preparation for any career or university choice.