



The Cardinal Wiseman School
A Level courses 2023-25

FURTHER MATHEMATICS

We follow the EDEXCEL syllabus.

Entry Requirements:

6 x grades 9 to 4 GCSE passes, including a 4 in English Language. The minimum entry criterion for this subject is a Grade 8 at GCSE Maths.

What will I study?

- **Further Core Pure Mathematics** which will include: Complex Numbers, Numerical Solution, Coordinate Systems, Matrices, Series, Proof, Inequalities, Differential Equations, Polar Coordinates.
- **Applied Mathematics** which includes Further Mechanics and Statistics. These will involve the study of:
Mechanics - Centres of Mass, Kinematics of Particles, Work Energy and Power, Collisions and Statics of Rigid Bodies.
Statistics - Binomial and Poisson distribution; Continuous Random Variables, Normal Approximations, Population and Samples; Sampling, Hypothesis Testing, Estimation and Confidence Intervals; Goodness of Fit and Contingency Tables; Regression and Correlation.

What are the examination/coursework requirements?

- Assessment is based on 4 examinations: 2 Core Pure, 1 Statistics and 1 Mechanics papers. The examinations are 1 hour and 30 minutes long, each scored out of 75. Each exam carries equal weighting and a calculator is allowed for all examinations. There is no coursework for A Level Further Mathematics.

What skills will I develop?

- Extend your knowledge beyond the regular Pure topics covered in A Level Maths
- Have the opportunity to go into applied mathematics topics in more depth
- Develop your problem solving and analytical skills in preparation for degree level courses
- Learn directly from ex-pupils how Further Maths links to degree level questions, and have the chance to gain an insight into which branch of Mathematics suits you.

How will this subject help me with my future career?

Further Maths is required by most Russell Group Universities for degrees in Mathematics, Physics, Engineering and many other Science based courses. In addition, Further Maths is regarded as one of the most demanding A Levels and will be very well received on any CV or application form. Stand out from the crowd – take Further Maths!