



About the course:

Paper 1: Further Mathematics Option 1

- Proof
- Complex numbers
- Matrices
- Further algebra and functions
- Further calculus
- Further vectors

Paper 3 Further Mathematics Option 1:

Students take one of the following four options:

3A: Further Pure Mathematics 3 - Further calculus, Further differential equations, Coordinate systems, Further vectors, Further numerical methods, Inequalities

3B: Further Statistics 1 - Linear regression, Statistical distributions (discrete), Statistical distributions (continuous), Correlation, Hypothesis testing, Chi squared tests

3C: Further Mechanics 1 - Momentum and impulse, Collisions, Centres of mass, Work and energy, Elastic strings and springs

3D: Decision Mathematics 1 - Algorithms and graph theory, Algorithms on graphs, Algorithms on graphs II, Critical path analysis, Linear programming

Paper 2: Further Pure Mathematics 2

- Complex numbers
- Further algebra and function
- Further calculus
- Polar coordinates
- Hyperbolic functions
- Differential equations

Paper 4: Further Mathematics Option 2:

Students take one of the following seven options:

4A: Further Pure Mathematics 4 - Groups, Further calculus, Further matrix algebra, Further complex numbers, Number theory, Further sequences and series

4B: Further Statistics 1 - Linear regression, Statistical distributions (discrete), Statistical distributions (continuous), Correlation, Hypothesis testing, Chi squared tests

4C: Further Statistics 2 - Probability distributions, Combinations of random variables, Estimation, Confidence intervals and tests using a normal distribution, Other hypothesis tests and confidence intervals, Other hypothesis tests and confidence intervals, Probability generating functions, Quality of tests and estimators

4D: Further Mechanics 1 - Momentum and impulse, Collisions, Centres of mass, Work and energy, Elastic strings and springs

4E: Further Mechanics 2 - Further kinematics, Further dynamics, Motion in a circle, Statics of rigid bodies, Elastic collisions in two dimensions

4F: Decision Mathematics 1 - Algorithms and graph theory, Algorithms on graphs, Algorithms on graphs II, Critical path analysis, Linear programming
4G: Decision Mathematics 2 - Transportation problems, Allocation (assignment) problems, Flows in networks, Dynamic programming, Game theory, Recurrence relations, Decision analysis





How will it be assessed:

The Pearson Edexcel Level 3 Advanced GCE in Further Mathematics consists of four externally-examined papers. Students must complete all assessment in May/June in Year 13.

Paper 1: Further Pure Mathematics 1 (*Paper code: 9FM0/01)

Paper 2: Further Pure Mathematics 2 (*Paper code: 9FM0/02)

Paper 3: Further Mathematics Option 1 (*Paper codes: 9FM0/3A-3D)

Paper 4: Further Mathematics Option 2 (*Paper codes: 9FM0/4A-4G)

What is expected of you:

We have the following expectations to help you achieve the best possible grade and to make teaching and learning enjoyable.

We expect you to continue your studies outside of lesson time. You should put in at least **30 minutes extra** per 50 minutes lesson of study. This *excludes* time spent on completing homework. You must do this to strengthen your understanding.

You must complete assigned homework. It is essential to independently assess your own work and understanding. If you are struggling or cannot answer certain questions you **must seek help**.

You must have at least 90+% attendance. If you are absent you must speak to your teacher and ensure you catch up on your work.

What it prepares you for:

It is a universally highly regarded course, although some employers require or expect other specific qualifications. Other departments will often like to see additional qualifications which balance the skills developed in mathematics.

Future Careers

Actuary, Accountant, Architect,
Engineer, Research and
Development, Stock Broker, Merchant Banker, Teacher, Pilot, Armed Forces,
Statistician, Health Worker,
Pharmacist...

Qualification details: Pearson Edexcel Level 3 Advanced GCE in Further Mathematics (9FM0)

Paper 1: Further Pure Mathematics 1 (*Paper code: 9FM0/01)

Paper 2: Further Pure Mathematics 2 (*Paper code: 9FM0/02)

Paper 3: Further Mathematics Option 1 (*Paper codes: 9FM0/3A-3D)

Paper 4: Further Mathematics Option 2 (*Paper codes: 9FM0/4A-4G)

Entry requirements: A minimum of a Level 7 in 9-1 GCSE Mathematics



For more information: Mrs Chapman Tel: 0151 638 8131 ext 130