Further Mathematics (AS Level)

Course objectives	Further Mathematics both extends and deepens student's knowledge and understanding beyond the standard A level Mathematics course. It provides a challenge and a chance to explore new or more sophisticated mathematical concepts. Further Mathematics can make the transition to higher education courses which are mathematically rich, that much easier.
Main qualifications	AS Level
Awarding Body	Edexcel
Duration/ Lessons per week	10 x 1 hour lessons over a two week timetable for 1 year
Entry requirements	Students will need at least a grade 8 on the Higher Tier in GCSE Mathematics
Progression opportunities	For progression to many courses at A level and University it is important to have strong mathematical skills. For most science, technology engineering and mathematics (STEM) degree courses, A Level Mathematics is a mandatory requirement and for some courses, AS Further Mathematics can assist transition to studying at a higher level.
Course content	The course builds on the skills, knowledge and understanding from the GCSE curriculum. The final assessment draws together students' understanding of different areas from both the first year of the A Level Mathematics course and AS Further Mathematics. Problem solving, proof and mathematically modelling are the overarching themes of the course. Topics covered in Core Pure Mathematics over the year include: • Proof by Induction • Complex Numbers • Matrices • Further Algebra and Functions • Volumes of Revolution • 3D Vectors

Further Mathematics (AS Level)

Course content

Topics covered in Further Statistics 1 over year includes:

- Discrete Random Variables
- Poisson and Binomial distributions
- Hypothesis testing
- Chi-squared tests

Topics covered in Decision 1 over the year includes:

- Algorithms and Graph Theory
- Algorithms on graphs
- Critical Path Analysis
- Linear Programming

Costs

Students will need a Casio Classwiz fx-991EX or equivalent. Students may wish to purchase a Casio CG100 Graphical Calculator instead.

These will be able to be purchased from the school at the beginning of Year 12.

Assessment

Students sit 2 externally-examined papers.

Paper 1: Core Pure Mathematics
50% of the qualification
1 Hour 40 minutes

Paper 2: Further Statistics 1 and Decision 1
50% of the qualification
1 hour 40 minutes

Staff contact

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