



Maths & Computing

Course Details		Further Maths
Exam Board	OCR MEI (TBC)	
Syllabus title	Further Mathematics GCE AS & A level (1 or 2 year linear course)	
Course Code	H635 (AS level), H645 (A level)	
Course Content	<p>The aim of the course is to develop a deeper understanding of further mathematics and an ability to use it in a variety of contexts, while extending mathematical thinking and problem solving. Students study a core of Pure Mathematics, with a major in either Statistics or Mechanics, along with a minor in other pure and applied topics. In Pure Mathematics you will study: Proof, Complex Numbers, Matrices and Transformation, Vectors and 3-D Space, Polynomials, Series, Calculus*, Polar Coordinates*, Hyperbolic Functions*, and Differential Equations*.</p> <p>In Mechanics you will study: Dimensional Analysis, Forces, Work Energy & Power, Momentum and Impulse, Circular Motion*, Hooke's Law, Centre of Mass, Vectors and Variable Forces*.</p> <p>In Statistics you will study: Sampling, Discrete Random Variables, Bivariate Data, Chi-squared tests, Bayes' Theorem*, Continuous Random Variables*, Inference*, and Simulation*.</p> <p>* denotes topics which are A level only</p>	
Assessment and weighting	For the AS level qualification you will sit 3 exams at the end of the first year (75 minutes each). For the A level qualification you will sit 3 exams at the end of the second year (varying in length from 75 minutes to 2 hours 40 minutes). There is no coursework for either qualification. Exams completed as part of the AS level qualification do not count towards the A level qualification.	
Trips/visits	There are occasionally conferences that we invite students along to.	
Future opportunities/career	A-Level Further Mathematics is a "facilitating subject", approved by Russell Group universities. It is a preferred course for studying Mathematics, Physics and Engineering, and would also feed into courses in Chemistry and Economics.	



Person Specification		Further Maths
Qualifications/ School record	Required	Candidates must have achieved a grade 7 in higher tier GCSE Mathematics.
	Attitude/Qualities	<ul style="list-style-type: none">• Hard working• Willing to seek help when stuck• Organised• Really enjoy Maths (as it is likely to be at least half of your timetable!)
Skills		<ul style="list-style-type: none">• Problem solver• Independent learner• Able to make connections within Maths and with the outside world.
Experience		
Qualifications/ School record	Desirable:	<ul style="list-style-type: none">• A* in Mathematics• C in Physics• 95% attendance in year 11
	Skills	
Experience		<ul style="list-style-type: none">• Have participated in Junior and Intermediate Maths Challenges.