

St John's Curriculum Overview – Year 12

Subject title	Further Maths
Setting arrangements	No setting
Time allowance each fortnight	17 hours

Introduction

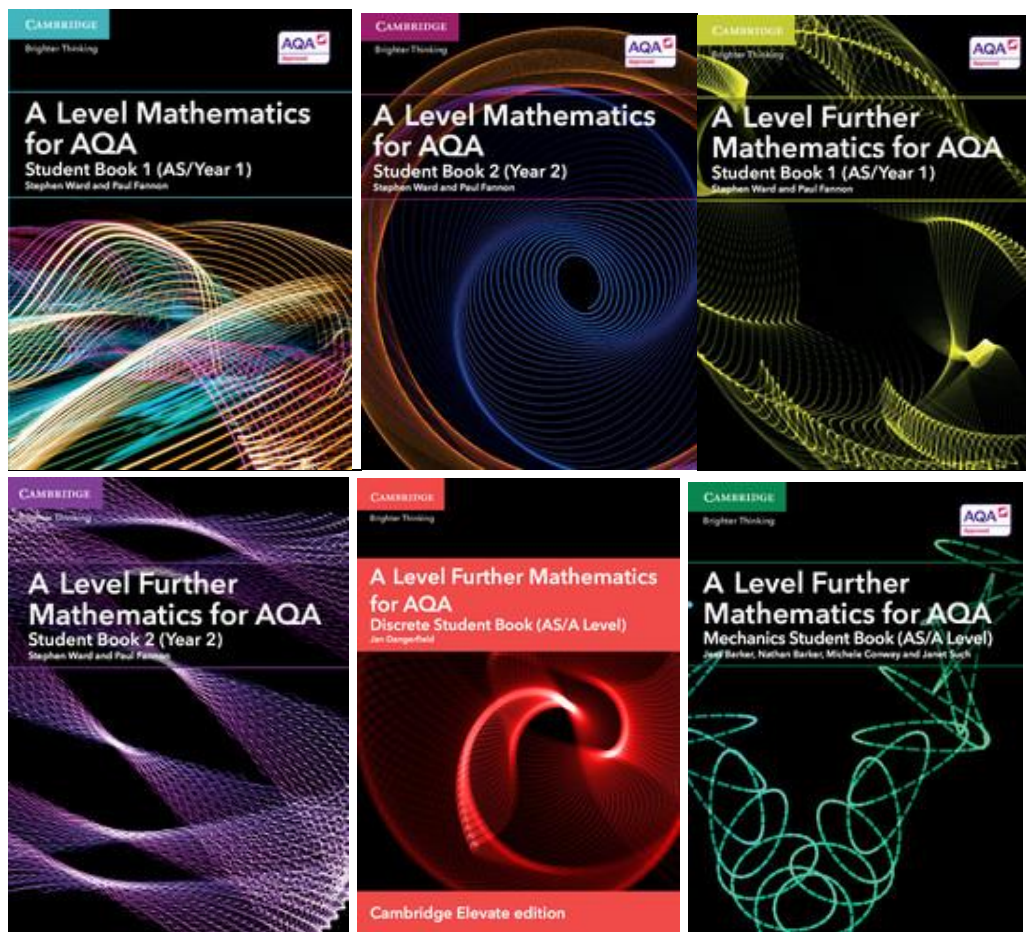
A Level Further Maths at St John's is taught to the AQA 7367 specification alongside A Level Maths to the AQA 7357 specification. This results in two A Levels at the end of the course. A Grade 7 at GCSE is required for this course.

Topics, Skills and Assessment covered during the course

	Topics covered	Skills developed	Assessment
Term 1	Proof and Mathematical Communication Indices and Surds Polynomials Logarithms Quadratic Functions Using Graphs Binomial Expansion Differentiation Applications of Differentiation Coordinate Geometry Trigonometric Functions and Equations Triangle Geometry	Extension of GCSE knowledge and the introduction of new skills, dependent on the topics covered. Details are found at the beginning of each chapter in the text book.	Initial Competence Test Homework and teacher assessment
Term 2	Exponential Models Working with Data Vectors Introduction to Kinematics Motion with Constant Acceleration Integration Radian Measure Proof and Mathematical Communication 2 Functions Further Transformations of Graphs	Extension of GCSE knowledge and the introduction of new skills, dependent on the topics covered. Details are found at the beginning of each chapter in the text book.	Homework and teacher assessment

Term 3	Probability Statistical Hypothesis Testing Force and Motion Objects in Contact Further Trigonometry Calculus of Exponential and Trig Functions Sequences and Series	Extension of GCSE knowledge and the introduction of new skills, dependent on the topics covered. Details are found at the beginning of each chapter in the text book.	Cross Topic Review Homework and teacher assessment
Term 4	Conditional Probability Applications of Vectors Projectiles Further differentiation Further Integration Rational Functions and Partial Fractions General Binomial Expansion Numerical Solutions of Equations	Extension of GCSE knowledge and the introduction of new skills, dependent on the topics covered. Details are found at the beginning of each chapter in the text book.	Homework and teacher assessment
Term 5	The Normal Distribution Further Hypothesis Testing Forces in Context Moments Further Applications of Calculus Differential Equations Numerical Integration	Extension of GCSE knowledge and the introduction of new skills, dependent on the topics covered. Details are found at the beginning of each chapter in the text book.	Cross Topic Review Homework and teacher assessment
Term 6	Complex Numbers Work, Energy and Power The Ellipse, Hyperbola and Parabola Rational Functions and Inequalities		Mock Exams <ul style="list-style-type: none"> • 3 x 2 hour papers • Paper 1 – Pure Maths only • Paper 2 – Pure and Mechanics • Paper 3 – Pure and Statistics

Resources Recommended for Revision and where they are available:



These books are available in class and every student is given a code to access an extended electronic version.

Homework

Every student is expected to match the number of hours spent in lessons with work completed in their own time.

Additional support and help for the course

One afternoon after school per week is set aside for revision workshops.

Extra-Curricular:

UKMT Maths Challenge, Team Maths Challenge and Olympiad for Girls