



St John's Curriculum Overview – Year 13



Subject title	Further Maths
Setting arrangements	No setting
Time allowance each fortnight	18 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	Polar Coordinates Matrices Matrix Transformation Further Calculus Series Proof by Induction Further Complex Numbers Transformation of Graphs Further Matrices Discrete Topics <ul style="list-style-type: none"> • Graphs • Networks • Linear programming 	Extension of Year 12 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 2	Graphs and Inequalities Further Vectors Further Polar Coordinates Hyperbolic Functions Further Calculus Further Differential Equations Discrete Topics <ul style="list-style-type: none"> • Critical Path Analysis 	Extension of Year 12 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

	<ul style="list-style-type: none"> • Game Theory 		
Term 3	Maclaurin Series Applications of Differential Equations Numerical Methods Discrete Topics <ul style="list-style-type: none"> • Binary Operations • Groups 	Extension of Year 12 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.	Mock Exams Homework and teacher assessment
Term 4	Mechanics Topics <ul style="list-style-type: none"> • Work, Energy and Power • Dimensional Analysis • Momentum and Collisions • Circular Motion • Centres of Mass • Moments and Couples 	Extension of Year 12 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	Exam Preparation		Homework and teacher assessment
Term 6	Study Leave		A Level Maths 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 A Level Further Maths Exams <ul style="list-style-type: none"> • 3 x 2 hour papers • Paper 1 & 2 – Pure Maths only • Paper 3 – Discrete and Mechanics

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