



Curriculum Plans – Year 12 - AS Pure Mathematics 1

Please find below a detailed outline of the curriculum covered in Pure Mathematics through Year 12 in Key stage 5.

BLOCK	1	2	3	4	5	6	7
Dates	28th August - 27th September (5 weeks)	2nd October - 27th October (4 weeks)	6th November - 15th December (6 weeks)	3rd January - 2nd February (5 weeks)	12th February - 22nd March (6 weeks)	2nd April - 26th April (4 weeks)	6th May - 21st June (7 weeks)
Topics	Quadratics Factorising, completing the square and using the quadratic formula Simultaneous equations and geometrical application Substitution Inequalities Minimum and maximum values, discriminant and roots Functions Composite, inverse function and graphs Single and combined transformations	Coordinate geometry Length of a line segment Midpoint Equations of parallel and perpendicular lines Equation of a circle Intersections of circles and lines Circular measure Using radians, trigonometry, Pythagoras' theorem and other geometrical properties to solve problems involving length of an arc and area of a sector	Trigonometry Sine, cosine and tangens functions and their inverses Graphs of trigonometric functions Identities Simple and more complex equations Series Binomial expansion and coefficients Arithmetic and geometric progressions Infinite geometric series	Differentiation Derivatives and gradient function Chain rule Tangents and normals Second derivative Further differentiation Increasing and decreasing functions Stationary points Practical applications of extreme values and rates of change	Integration Reversing differentiation and calculating the constant Definite integration Area under a curve and between two curves Improper integrals Volumes of revolution	AS Level External Examinations	
Assessments	Chapter 1 and 2 assessment	Chapter 1 - 4 assessment	Chapter 1 - 6 assessment	Mock Examinations	Chapter 1 - 9 assessment	External examinations	
Academic Theme	Planning for Tomorrow	The World around us	Better Together	The Working World	Opportunities for Everyone	Keep it Green, Keep it Clean	