Further Maths A-Level Curriculum Intent	
Year 12 and 13	Students should build upon their existing mathematical knowledge, developing logical thinking skills and problem solving skills. Students should develop conceptual understanding, and the ability to find and appreciate links between different elements of mathematics (and other closely related disciplines) moving beyond a purely procedural understanding. Students will leave with the required skills and knowledge needed to pursue the study of mathematics or another STEM discipline at a higher level, as well as a deeper appreciation of the beauty of mathematics.

Further Maths A-Level Curriculum Implementation						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 12	***Maths "Year 1" pure content*** **Algebra** Proof Index law Quadratics Simultaneous equations Inequalities Binomial theorem Algebraic division **Graphs** Straight lines Circles Transformations **Trigonometry** Triangle problems Trig graphs CAST diagram Solving equations **Calculus**	**Exponentials and Logs** Laws of logs Exponential functions Curve fitting ***Maths "Year 1" applied content*** **Statistics** Collecting and representing data Probability Discrete random variables Binomial distribution **Mechanics** Kinematics Forces and Newton's Laws ***Maths "Year 2" pure content***	**Sequences & Series** Arithmetic Geometric **Binomial Theorem** **Trigonometry** Radian measure Inverse trig functions Reciprocal trig functions Compound angles $a\cos\theta + b\sin\theta$ **Numerical methods** Iteration Newton-Raphson method **Vectors** 3D Vectors **Calculus**	**Calculus cont…** ***Maths "Year 2" applied content*** **Statistics** Conditional Probability Normal Distribution **Mechanics** Kinematics in 2D Projectiles Stiatics Dynamics Moments	***Further Maths "Year 1" core pure content*** **Complex numbers** Properties Arithmetic Solving equations Argand diagrams Modulus argument form Loci **Matrices** Properties Arithmetic Transformations	**Algebra and series** Roots of polynomials Summing powers Proof by induction **Vectors** Straight lines Scalar product Planes

	Differentiation integration **Vectors** 2D vectors	**Agrabra** Further proof Functions Parametric equations Partial fractions	Differentiation, including chain run, product rule Integration including substitution and by parts			
Year 13	**Calculus** Volumes of revolution ***Further Maths "Year 2" core pure content*** **Complex numbers** De Moivre Roots of unity ***Further Maths chosen units*** **Further Mechanics 1** Work energy power Hooks Law Momentum Collisions Impulses	**Series** **Polar Coordinates** **Hyperbolics** **Further Mechanics 1 cont ...**	**Calculus** Improper integrals Inverse trig functions Hyperbolic functions Partial fractions Polar graphs and areas **Further Statistics 1** **Poisson distribution** Negative binomial distribution Geometric distribution CLT PGF Chi-squared	**Calculus cont…** **Differential equations** First order Second order Simple harmonic motion Modelling Coupled **Further Statistics 1 cont...**	**Revision**	**Exam period**