Curriculum Plans – Year 13 - A2 Pure Mathematics 2 and 3

Please find below a detailed outline of the curriculum covered in Pure Mathematics through Year 13 in key stage 5.

BLOCK	1	2	3	4	5	6	7
Dates	August - September (5 weeks)	October (4 weeks)	November - December (6 weeks)	January - February (5 weeks)	February - March (6 weeks)	April (4 weeks)	May - June (7 weeks)
Topics	**Algebra** Modulus functions Polynomials Quotients and Remainders Factor and remainder theorem **Logarithmic and exponential functions** Logarithms and indices Properties of e^x and $\ln x$ Linear equations which have the function e^x and $\ln x$	**Trigonometry** Advanced trig identities Cosec, Sec, Cot Double angle formula and new expressions for trig. **Differentiation** Product and quotient rules Differentiation of e, ln and trig. Parametric and implicit differentiation	**Integration** Integration of e, fractions and trig identities. **Numerical solutions of equations** Find a root of an equation by means of graphical consideration and/or sign change. **Further Algebra** Rational functions Partial fractions Expansions of brackets with degrees less than 1	**Further calculus** Derivative of inverse tan, integrate fraction, integrate using substitution and parts. **Vectors** vectors in 2 and 3 dimensions, calculate Magnitudes, Vector equation of the line, Parallel, intersect or skew	**Differential Equations** Creating and solving differential equations **Complex numbers** Complex numbers Real and imaginary parts Square and cube roots of equations Argand diagrams Exponential form	A2 Level External Examinations	
Assessments	Chapter 1 and 2 assessment	Chapter 1 - 4 assessment	Chapter 1 - 7 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	Healthy Body, Healthy Mind