Key Stage 5 Curriculum Map 2020-21

Year 13 Term 1

Subject: Mathematics		Year: 13	
Focus/Topic	**UAE Links**	**HPL Links**	**Home Learning / Reading**
• Orientation and Induction		Empathetic - Confident	
• Functions-composite and inverse, sketching functions		Linking – Connection finding	See Guided Reading
• Modulus functions and sketching, Transformations of graphs, algebraic simplification and division, partial fractions (linear factors) Assessed homework		Analysing – Critical or logical thinking	See Guided Reading
• Partial fractions (repeated factors) Binomial Expansion – negative and rational powers, related to partial fractions, approximations Test on chapters 1 and 2		Hard working – Resilience	See Guided Reading
• Trig Functions and Formulae – Inverse trig functions, cosec, cot, sec, Pythagoras, Statistics Poisson Distribution Mechanics – Modelling, reminder of F = ma, connected particles, SUVAT		Linking – Big picture thinking	See Guided Reading
• Trig formulae - addition formulae, double angles Poisson as an approximation to the Binomial distribution Vectors and variable acceleration Assessed homework		Analysing – Complex and multi step problem solving	See Guided Reading
• Trigonometry Rcos(θ ± α) etc solving equations, max/min values Sum of independent Poisson random variables Mechanics Use of diagrams to solve problems, Resultant Force		Agile - Enquiring	See Guided Reading
Half Term			
• Exponential and Log functions – ex and natural log function Applications of Poisson Distn Equilibrium and Friction Test on Trig, Poisson and Mechanics		Analysing – Critical or logical thinking	Chapter 4 - AQA AS Level textbook
• Differentiation of all new functions, chain rule, product rule, quotient rule Continous Probability distributions pdf and sketching it Calculation of moment of a force		Linking – Seeing alternative perspectives	Chapter 5 - AQA AS Level textbook
• Implicit functions, parametric equations and differentiation Finding the cumulative distribution function, working out		Creating – Flexible thinking	Chapter 6 and 16 - AQA AS Level textbook

probabilities using integration, the median Statics problems Assessed homework			
• Finish differentiation and Parametric equations Expectation and variance, also with linear combinations of continuous random variables Centre of Mass in 1 and 2 dimensions		Realising - Automaticity	Chapter 6 and 16 - AQA AS Level textbook
• Integration of basic functions – standard integrals Sum of independent Normal random variables Centre of mass of Laminae and suspending from a point Test on Differentiation, Trigonometry, continuous random variables , Statics and centres of mass		Realising – Spedd and accuracy	Chapter 7 and 17 - AQA AS Level textbook
• Integration using a change of variable Further applications of continuous random variables Simple centre of mass for 3D shapes		Realising - Automaticity	See Guided Reading
• Integration using a substitution Finish off continuous random variables Centre of Mass to be completed		Analysing – Critical or logical thinking	See Guided Reading
Winter Break			