

Key Stage 5 – YEAR 13 A level Maths – 2022-2023
Curriculum Map for Students

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
Topic Overview	Functions and Graphs. Binomial Expansion Radian Measure. Reciprocal Trig Functions. Trig equations and identities. Modelling using Trigonometry	Parametric Equations Numerical Methods Further Differentiation	Integration Vectors Statistics Regression, Correlation. Conditional Probability	Statistics Normal Distribution Mechanics Moments Forces + Friction Projectiles	Mechanics Applications of Forces Further Kinematics Variable acceleration
Focus	Modulus Function, Functions and Mappings. Composite and Inverse functions. Transformations of graphs. Binomial Expansion for fractional and negative powers of “n”. Approximations using Partial Fractions Radian Measure. Arc length and Sector Area, segments etc. Solving trig equations using Radians. Reciprocal Trig Functions. Solving equations and proving identities. Simplifying Expressions. Inverse Trig Functions Addition/Double Angle formulae and their applications. The form $A\cos x + B\sin x$. Modelling	Sketching curves defined parametrically. Use of Trig variables. Point of intersection. Locating roots, process of finding iteration formulae. Using Iteration. Staircase and spiral diagrams. Newton Rhapsom Method. Differentiating Sin, cos, ln and “e”. Applying Chain rule, product Rule and quotient rule. Using trig identities and diff other trig functions. Parametric + Implicit Differentiation, equations of tangents and normals. 2 nd derivates. Connected rates of Change	Integration of standard functions. Integration using trig identities. Integration by inspection (Reverse Chain Rule) Integration by Parts/ Substitution. Integration using Partial Fractions. Finding Areas by integration including parametric integration. The trapezium rule. Solving diff equations by separating variables. Modelling by forming and solving Diff Eq. 3D and relative position. Solving geometrical problems. Models, correlation, Hypothesis Testing. Conditional Probability laws and Venn Diagrams	Finding Probabilities using Normal Curve. Standardising to the Z value. Inverse normal distribution applications. Finding mean and variance. Normal approx. to Binomial Distribution. Hypothesis Testing using Normal Distribution Moments, resultant moments, Equilibrium, Centres of Mass and Tilting Horizontal Projection. Vertical and horizontal components. Angle of projection. Projection Formulae	Static Particles and static modelling. Friction. Rigid bodies Dynamics and inclined planes. Connected Particles Vector in Kinematics Vector methods applied to projectiles. Variable acceleration in one dimension and two dimensions using vectors. Differentiation and Integration applied to vectors. Revision and Past papers.
Assessment	<i>Assessment Pure bk 2</i> <i>Ch 1,2,3,4,5,6,7</i>	<i>Year 13 Mock exams</i>	<i>Assessment Pure Bk 2</i> <i>Ch 10,11,12,13</i>	<i>Assessment Applied bk2</i> <i>Ch 1,2,3,4,5</i>	<i>A level Exams</i>