

## Implementation Curriculum Overview A-Level Maths

A learner in Year 12 will cover the prescribed national A-Level Mathematics curriculum, covering the overarching themes of:

- 1) Mathematical argument, language and proof
- 2) Mathematical Problem Solving
- 3) Mathematical Modelling

IMPLEMENTATION – planned and sequenced towards cumulative knowledge and skills

Term 1	Year 12	Year 13	Autumn Summative Assessment
	<ul style="list-style-type: none"> <li>➤ Algebraic manipulation, quadratic equations and simultaneous equations</li> <li>➤ Probability and statistical distributions</li> <li>➤ Straight lines and circles</li> <li>➤ Statistical hypothesis testing</li> <li>➤ Differentiation</li> <li>➤ Graphs, linear and quadratic inequalities</li> <li>➤ Exponentials and logarithms</li> <li>➤ Methods of Proof</li> </ul>	<ul style="list-style-type: none"> <li>➤ Binomial theorem, sequences and series</li> <li>➤ Functions and Transformation of Graphs</li> <li>➤ Statistical Distributions – Normal Distribution</li> <li>➤ Further Probability and Hypothesis Testing</li> <li>➤ Further Differentiation</li> <li>➤ Numerical Methods</li> <li>➤ Trigonometry and Circular Measure</li> </ul>	<p>Questions based on the content taught covering all 3 AOs:</p> <ul style="list-style-type: none"> <li>➤ AO1: Use and apply standard techniques</li> <li>➤ AO2: Reason, interpret and communicate mathematically</li> <li>➤ AO3: Solve problems within mathematics and in other contexts</li> </ul>
Term 2	Year 12	Year 13	Spring Summative Assessment
	<ul style="list-style-type: none"> <li>➤ Exponentials and logarithms</li> <li>➤ Binomial expansions</li> <li>➤ Integration</li> <li>➤ Trigonometry</li> <li>➤ Vectors</li> <li>➤ Statistical sampling</li> <li>➤ Statistical Analysis and Presentation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Partial fractions and integration</li> <li>➤ Further integration</li> <li>➤ Trigonometry</li> <li>➤ Parametric Equations</li> <li>➤ Differential Equations</li> <li>➤ Parametric Equations</li> <li>➤ Proof</li> </ul>	<p>Questions based on the content taught covering all 3 AOs:</p> <ul style="list-style-type: none"> <li>➤ AO1: Use and apply standard techniques</li> <li>➤ AO2: Reason, interpret and communicate mathematically</li> <li>➤ AO3: Solve problems within mathematics and in other contexts</li> </ul>
Term 3	Year 12	Year 13	Summer Summative Assessment
	<ul style="list-style-type: none"> <li>➤ Forces and Newtons Laws</li> <li>➤ Kinematics in one Dimension</li> <li>➤ Analysis of a Large Data Set</li> <li>➤ Statistical distributions – Normal Distribution</li> <li>➤ Summer examinations and revision</li> <li>➤ Trigonometry and circular measure</li> </ul>	<ul style="list-style-type: none"> <li>➤ Equilibrium and Resolving Forces</li> <li>➤ Statics and Dynamics</li> <li>➤ Moments</li> <li>➤ Kinematics in One Dimension</li> <li>➤ Summer Examinations</li> </ul>	<p>A-Level Maths Exam</p>