

## CURRICULUM OVERVIEW: KS5 Mathematics

Exam board: Pearson Edexcel Mathematics		
	Year 12	Year 13
<b>Autumn term</b>	<ul style="list-style-type: none"> <li>Algebraic Methods, including Polynomial Graphs, Inequalities, Simultaneous Equations, and Transformations.</li> <li>Introduction to Differentiation (derivatives of Polynomials).</li> <li>Introduction to Integration (integrals of Polynomials).</li> <li>Coordinate Geometry (straight lines and circles).</li> <li>Data Collection, Measures of Centrality and Spread, Statistical Distributions, and Hypothesis Testing.</li> <li>Modelling in Mechanics, and Constant Acceleration.</li> </ul>	<ul style="list-style-type: none"> <li>Further Trigonometry, proving and solving using further trigonometric identities.</li> <li>The graphs of secant, cosecant, cotangent, and their place within equations.</li> <li>Further Differentiation</li> <li>Further Integration</li> <li>Regression Analysis, Conditional Probability, and the Normal Distribution.</li> <li>Moments of a Force</li> </ul>
<b>Spring term</b>	<ul style="list-style-type: none"> <li>Further Algebraic Methods, dividing polynomials, the factor theorem, and proof.</li> <li>The Binomial Expansion.</li> <li>Trigonometry, including the sine and cosine rules, trigonometric identities, and solving trigonometric equations.</li> <li>Probability and Correlation.</li> <li>Forces &amp; Motion, and Variable Acceleration.</li> </ul>	<ul style="list-style-type: none"> <li>The Binomial Expansion</li> <li>Parametric Equations</li> <li>Numerical Methods, including application of the Newton-Raphson Method.</li> <li>Functions and Graphs</li> <li>Sequences and Series.</li> <li>Forces and Friction, and Applications of Forces.</li> <li>Projectiles, and Further Kinematics.</li> </ul>
<b>Summer term</b>	<ul style="list-style-type: none"> <li>Revision (preparation for AS exams)</li> <li>External exams</li> <li>Partial Fractions and Radians.</li> <li>Further Trigonometric Identities.</li> </ul>	<ul style="list-style-type: none"> <li>Revision (preparation for A-level exams)</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>In May/June, students sit a 2 hour exam in Pure Mathematics, and a 1 hour 15 minute exam in Statistics and Mechanics, together covering all of the year 12 content. These are externally assessed and results are received in August.</li> <li>Students are assessed throughout the year internally (please see the school assessment calendar for more information).</li> </ul>	<ul style="list-style-type: none"> <li>Students sit 3 x 2 hour exams covering all of the year 12/13 content in May/June. These are externally assessed and results are received in August.</li> <li>Students are assessed throughout the year internally (please see the school assessment calendar for more information).</li> </ul>