

SUBJECT - MATHS

Key Stage 5

Year Group	Topics Covered	Overview of Assessment
Year 12	<p><u>Pure Unit</u></p> <p>Topics taught are:</p> <ul style="list-style-type: none"> • Algebra • Polynomials & Binomial Theorem • Trigonometry • Differentiation & Integration • Exponentials & Logarithms • Vectors <p><u>Applied Unit</u></p> <p>Topics taught in Statistics are:</p> <ul style="list-style-type: none"> • Collecting, Representing & Interpreting Data • Probability & discrete Random Variables • Hypothesis Testing <p>Topics taught in Mechanics are:</p> <ul style="list-style-type: none"> • Units & Kinematics • Forces & Newton's Law 	<p>All units will be assessed through frequent practice papers throughout the course. Regular homework will be set to check understanding</p> <p>The final assessment is a formal exam for each unit.</p>
Year 13	<p><u>Unit 4: - Core 3</u></p> <p>Topics taught in C3 are:</p> <ul style="list-style-type: none"> • Algebra & Series • Functions • Trigonometry • Differentiation • Numerical Methods <p><u>Unit 5: - Core 4</u></p> <p>Topics taught in C4 are:</p> <ul style="list-style-type: none"> • Algebra & Series • Coordinate Geometry • Differentiation • Integration • Numerical Methods • Vectors <p><u>Unit 6: - Decision 1</u></p> <p>Topics taught in D1 are:</p> <ul style="list-style-type: none"> • Algorithms • Graphs & Networks • Algorithms on networks • Route Inspection (Chinese postman problem) • Critical Path Analysis • Linear Programming • Matchings 	<p>All units will be assessed through frequent practice papers throughout the course. Regular homework will be set to check understanding</p> <p>The final assessment is a formal exam for each unit.</p>

SUBJECT - FURTHER MATHS

Key Stage 5

Year Group	Topics Covered	Overview of Assessment
Year 12	<p><u>Pure Unit:</u></p> <p>Topics taught in the pure unit are:</p> <ul style="list-style-type: none">• Matrices• Complex Numbers• Roots of Equations• Sequences & Series• Vectors• Calculus <p><u>Applied Unit:</u></p> <p>Topics taught in Statistics are:</p> <ul style="list-style-type: none">• Mean & Expectation• Poisson Distribution• Binomial Distribution• Hypothesis Testing• Chi Square Tests <p>Topics taught in Decision are:</p> <ul style="list-style-type: none">• Algorithms• Graphs & Networks• Critical Path Analysis• Linear Programming	<p>All units will be assessed through frequent practice papers throughout the course. Regular homework will be set to check understanding</p> <p>The final assessment is a formal exam for each unit.</p>

SUBJECT - FURTHER MATHS

Year 13	<p><u>Unit 1:</u> - Further Pure 2</p> <p>Topics taught in FP2 are:</p> <ul style="list-style-type: none">• Inequalities• Series• Further Complex Numbers• First Order Differential Equations• Second Order Differential Equations• Maclaurin and Taylor Series• Polar Coordinates <p><u>Unit 2:</u> - Mechanics 2</p> <p>Topics taught in M2 are:</p> <ul style="list-style-type: none">• Kinematics of a Particle moving in a straight line or plane• Centre of mass• Work, energy and power• Collisions• Statics of rigid bodies <p><u>Unit 3:</u> - Decision 2</p> <p>Topics taught in D2 are:</p> <ul style="list-style-type: none">• Transportation problems• Allocation (assignment) problems• The Travelling Salesman Problem• Further Linear Programming• Game Theory• Network Flows• Dynamic Programming	<p>All units will be assessed through frequent practice papers throughout the course. Regular homework will be set to check understanding</p> <p>The final assessment is a formal exam for each unit.</p>
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