

# Subject: A'level Further Mathematics

## Year 12 (Modules, Topics)

Term 1	Term 2	Term 3
<p>Introduction to complex numbers            Basic operations with complex numbers (in radians)            Equations with complex roots            Argand diagrams and loci            Roots of polynomials            Introduction to matrices            Determinants and inverses            Vectors (including cross product &amp; eqns of lines)            Linear transformations using matrices            Invariance and scale factors            Solving simultaneous equations using matrices            Proof by induction (including involving matrices)            Dimensional analysis            Energy</p> <p><b>Resources:</b>            Integral resources</p> <p><b>Assessment:</b>            Weekly homework and termly assessment.</p>	<p>Resolving forces            Momentum, restitution &amp; impulse            Work, energy &amp; power            Uniform circular motion            Vertical circular motion            Notation and problem solving (inc. inclusion-exclusion principle)            Graphs            Graphs            Algorithms (sorting &amp; packing)            Algorithms (networks)</p> <p><b>Resources:</b>            Integral resources</p> <p><b>Assessment:</b>            Weekly homework and termly assessment.</p>	<p>Algorithms (efficiency considerations)            Critical path analysis            Linear programming            Game theory            Pure core revision &amp; consolidation            Consolidation, revision and mock assessment</p> <p><b>Resources:</b>            Integral resources</p> <p><b>Assessment:</b>            Weekly homework and termly assessment.</p>

