



## Programme of Study – AS/A Mechanics

	Theme	Overview of key learning to take place	How learning will be assessed
Term 2	General Motion in a straight line	<p><b>Chapter 6: General Motion in a straight line.</b></p> <p>6.1 I can use differentiation to calculate velocity when displacement is given as a function of time.</p> <p>6.2 I can use differentiation to calculate acceleration when velocity is given as a function of time.</p> <p>6.3 I can use integration to find displacement when velocity is given as a function of time.</p> <p>6.4 I can use integration to find velocity when acceleration is given as a function of time.</p>	<p><b>Examples of Formative Assessment to be used this term:</b> Question worksheets Exercise tasks</p> <p><b>Summative assessment</b> Assessment to take place 2 times this term. Week 4- Online informal quiz Week 9- Mock exams TBC</p> <p>Students will receive a mark for each assessment and personalised next steps for improvement</p>
Term 2	Momentum	<p><b>Chapter 7: Momentum</b></p> <p>7.1 I can calculate the momentum of a moving body or a system of bodies.</p> <p>7.2 I can use principle of conservation of momentum to solve problems involving the direct impact of two bodies that separate after impact.</p> <p>7.3 I can use the principle of conservation of momentum to solve problems involving the direct impact of two bodies that coalesce on impact.</p>	
Term 2	Work and energy	<p><b>Chapter 8 : Work and energy</b></p> <p>8.1 I can calculate the work done by a force in moving a body.</p> <p>8.2 I can calculate kinetic energy and gravitational potential energy of a body.</p>	
Term 2	The work – energy principle and power	<p><b>Chapter 8 : The work – energy principle and power</b></p> <p>8.1 I can use the work – energy Principle.</p> <p>8.2 I can calculate power of a moving body.</p> <p>8.3 I can understand when mechanical energy is conserved.</p> <p>8.4 I can use power to calculate the maximum speed of a moving body.</p>	