

Key Stage 5 – A-level Physics

	Year 12	Year 13
Autumn 1	<p>Motion</p> <ul style="list-style-type: none"> Physical quantities and units Scalars and vectors Kinematics Linear motion <p>Forces in action</p> <ul style="list-style-type: none"> Force Non-linear motion Equilibrium Car safety 	<p>Newton's Laws and momentum</p> <ul style="list-style-type: none"> Newton's laws of motion Collisions <p>Thermal physics</p> <ul style="list-style-type: none"> Solid, liquid and gas Temperature Thermal properties of materials <p>Circular motion and oscillations</p> <ul style="list-style-type: none"> Circular motion Gravitational fields Simple harmonic oscillations
Autumn 2	<p>Work and energy</p> <ul style="list-style-type: none"> Work and conservation of energy Kinetic and potential energies Power Behaviour of springs and materials 	<p>Medical imaging</p> <ul style="list-style-type: none"> X-rays Diagnostic methods in medicine Ultrasound <p>Electric and magnetic fields</p> <ul style="list-style-type: none"> Electric fields Magnetic fields
Spring 1	<p>Electric current</p> <ul style="list-style-type: none"> Current Circuit symbols <p>Resistance</p> <ul style="list-style-type: none"> E.m.f and P.D Resistance Resistivity Power <p>Waves</p> <ul style="list-style-type: none"> Wave motion Electromagnetic waves Interference Stationary waves 	<p>Electric and magnetic fields</p> <ul style="list-style-type: none"> Electromagnetism <p>Nuclear physics</p> <ul style="list-style-type: none"> The nuclear atom Fundamental particles Radioactivity Nuclear fission and fusion
Spring 2	<p>DC circuits</p> <ul style="list-style-type: none"> Series and parallel circuits Practical circuits <p>Quantum physics</p> <ul style="list-style-type: none"> Energy of a photon The photoelectric effect Wave-particle duality Energy level in atoms 	<p>Capacitors and exponential decay</p> <ul style="list-style-type: none"> Capacitors <p>Modelling the Universe</p> <ul style="list-style-type: none"> Structure of the universe The evolution of the universe
Summer 1	Revision and exam preparation	Revision and exam preparation
Summer 2	Newton's Laws and momentum	