Physics A Level

Features of the Course:

- Motivating, up-to-date, contemporary contexts where physics has helped to improve lives
- Many opportunities for practical and investigative work
- Opportunities to apply physics principles and concepts in familiar and new contexts
- Chance to find out how physics is used in engineering and technology and how physics research has extended our understanding of the physical world at a fundamental level

Units

Paper 1, Advanced Physics 1

This unit involves the study of mechanics, electricity, electric and magnetic fields, and particle physics. Contexts include modern rail transport system, communications and display techniques. Particle physics is the subject of current research, involving the acceleration and detection of high-energy particles, the quark-lepton model, how particle accelerators work and how the Higgs boson was finally found.

Paper 2, Advanced Physics 2

This unit involves the study of materials, waves and the wave/particle nature of light, thermal energy, nuclear decay, oscillations, astrophysics and cosmology including the formation and evolution of stars, the big bang, the history and future of the universe.

Paper 3, General and Practical Principles in Physics

Questions in this paper may draw on any of the topics in this specification; questions will assess students' understanding of experimental methods and will draw on their experiences of the core practicals.

Methods of Assessment:

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Paper 1: One hour 45 minutes written paper, 30% of total A level marks
Paper 2: One hour 45 minutes written paper, 30% of total A level marks
Paper 3: Two hours 30 minutes written paper, 40% of total A level marks