# Physics A-Level

**Exam board:** AQA

Physics is the foundational science that explores the fundamental principles governing the universe, from the smallest subatomic particles to the vastness of galaxies. Through both theory and practical experiments, physics seeks to explain how the natural world works, uncovering the laws that govern motion, energy, and matter.

Studying physics is essential for those curious about the fundamental workings of the universe and who enjoy problem-solving and analytical thinking. It fosters a deep understanding of how various systems interact, equipping students with critical skills applicable in diverse fields, including engineering, astronomy, medicine, and technology. Physics not only inspires innovation and advances scientific knowledge but also encourages a mindset of inquiry and exploration. Whether you're aiming for a career in research, engineering, or even finance, a background in physics provides the analytical tools and scientific literacy necessary to thrive in an increasingly complex world.

**Entry requirements:**
PH6 standard entry requirements of five + GCSEs (or equivalent) grades 9-5.
Grade 6-6 or above in GCSE Combined Science or Grade 6 in biology, chemistry, and physics.
Grade 6 or above in GCSE Mathematics.
Although not a requirement, there is a benefit to studying A-level mathematics alongside A-level physics.

**Student attributes:**
- Naturally inquisitive and curious nature, prepared to ask questions and challenge ideas.
- Attention to detail and preparedness to be precise in use of language and making measurements.
- Commitment and discipline to enable fact retrieval.
- Willingness to employ trial and error techniques when solving problems or practical problems.
- Resilience and perseverance: prepare to be challenged, to have your ideas about the world challenged, and handle setbacks.
- Interest in the subject: have a passion for the subject and read about the subject beyond the specification.

**Course Content & Assessment:**
A-Level Physics is a linear subject: all assessment is through written exams at the end of Year 13.
Paper 1: 2 hours, 34% of A-level, short, long, and multiple-choice questions.
Paper 2: 2 hours, 34% of A-level, short, long, and multiple-choice questions.
Paper 3: 2 hours, 32% of A-level, practical skills & data analysis, choice of astrophysics, medical physics, engineering, turning points, or electronics.

**Future Destinations:**
- University degrees: physics, engineering (mechanical, electrical, electronic, aerospace, civil), astrophysics, materials science, nuclear engineering, geophysics, economics, finance, architecture, computer science, philosophy, statistics.
- Professions: data scientists, engineer, medical physicist, materials scientist, aerospace engineering, electronic engineering, energy systems coordinator, quantitative analyst, finance analyst, software developer, technical writer.

*"You have to be bold, and you have to be willing to be a pioneer"*

*Mary Jackson (1985)*

*Aerospace Engineer for NASA 1951-- 1985*