

OCR AS & A LEVEL PHYSICS (A)

An A Level in Physics is a rewarding and challenging course that tests your practical and academic ability throughout its delivery. The course is perfectly suited to logical, critical and imaginative thinkers who have a strong work ethic, combined with a desire to explore our physical world. You will learn about the core concepts of Physics, the impact of operational research in this field, and how the content of the course links to everyday life. This course expands on your string mathematics skills, especially algebra, and allows you to use your skill set in a more applied setting. Physics is often cited as a desired A Level by the top universities across the country, and offers many interesting and unique career paths in new and exciting job sectors.

COURSE CONTENT

Year 12

Module 1: Development of Practical Skills in Physics.

Module 2: Foundations of Physics. Physical Quantities and Units; Scalars and Vectors; Measurements.

Module 3: Forces and Motion.

Motion; Forces in Action; Work, Energy and Power; Materials; Newton's Laws of Motion and Momentum.

Module 4: Electrons, Waves and Photons.

Charge and Current; Energy, Power and Resistance; Electrical Circuits; Waves; Quantum Physics.

Year 13

In addition to the modules studied as part of Year 12, the following modules are studied in Year 13:

Module 5: Newtonian World and Astrophysics.

Thermal Physics; Circular Motion; Oscillations; Gravitational Fields; Astrophysics.

Module 6: Particles and Medical Physics.

Capacitors; Electric Fields; Electromagnetism; Nuclear and Particle Physics; Medical Imaging.

ASSESSMENT

Year 12 examinations:

- **Breadth in Physics:** 70 marks, 1 hour 30 minutes written paper (50% of AS Level).
- **Depth in Physics:** 70 marks, 1 hour 30 minutes written paper (50% of AS Level).

Practical endorsement - a non exam assessment which does not contribute to the final grade.

Year 13 examinations:

- **Modelling Physics (01):** 100 marks, 2 hours 15 minutes written paper (37% of A Level) - assesses modules 1, 2, 3 and 5.
- **Exploring Physics (02):** 100 marks, 2 hours 15 minutes written paper (37% of A Level) - assesses modules 1, 2, 4 and 6.
- **Unified Physics (03):** 70 marks, 1 hour 30 minutes written paper (26% of A Level) - assesses modules 1 to 6.

SUBJECT COMBINATIONS

A Level Physics matches well with A Levels in other Sciences, Mathematics and BTEC Engineering.



TRINITY
SIXTH FORM

ENTRY REQUIREMENTS

At least 5 GCSEs at grade 5 and above including English & Maths. Grade 5 in Maths is important as 30% of A Level Physics is maths based content.

Students should also have gained a minimum of two grade 5s at higher tier in GCSE Science. It is anticipated that students will have studied Physics as a Separate Science subject or followed the Combined Science route.

PROGRESSION

A Level Physics provides the skills and knowledge to explore many different fields of study in higher education. The study programmes most often taken by A Level Physics students are degrees in Engineering, Science, Computing, Geography and Mathematics.

FUTURES

Careers that are common for students with A Level Physics are Civil Engineer, Sciences such as Renewable Energy, Green Energy and Mechanics, as well as Information Technology and Engineering. Students also have the option to pursue post-16 employment and apprenticeships which are now more common for aspiring Physicists.



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COURSE CONTACT

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