

Physics A Level

Entry Requirement: Grade 8 Physics or Science & Additional Science
Awarding Body: AQA

Subject Content

The A-Level Physics curriculum encompasses a broad range of foundational and advanced topics. It begins with Measurements and their errors, which introduces students to the principles of precision, accuracy, and uncertainty in scientific data. This is followed by Particles and radiation, where learners explore the nature of subatomic particles and the interactions that govern nuclear phenomena.

The study of Waves covers the behaviour of mechanical and electromagnetic waves, including interference, diffraction, and the Doppler effect. Mechanics and materials delves into Newtonian mechanics, forces, energy, and the properties of materials under stress. The Electricity section builds on circuit theory, electrical quantities, and practical applications.

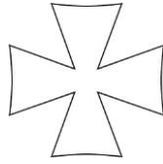
Advanced topics include Further mechanics and thermal physics, which extends understanding of circular motion, simple harmonic motion, and the laws of thermodynamics. Fields and their consequences examines gravitational, electric, and magnetic fields, and their influence on matter. Finally, Nuclear physics explores radioactive decay, nuclear energy, and the applications of nuclear technology.

An Optional Topic is also included: Engineering and physics, which allows students to apply physical principles to real-world engineering contexts, bridging theoretical knowledge with practical innovation.

Assessments

The A-Level Physics qualification is assessed through three written papers, each contributing to the final grade.

Paper 1 assesses content from Sections 1 to 5 and Section 6.1 (Periodic motion). This paper is a two-hour written exam worth 85 marks, accounting for 34% of the A-Level. It includes 60 marks of short and long answer questions, alongside 25 multiple choice questions.



Paper 2 focuses on Sections 6.2 (Thermal Physics), 7, and 8, with assumed knowledge from Sections 1 to 6.1. Like Paper 1, it is a two-hour written exam worth 85 marks and 34% of the A-Level. The format mirrors Paper 1, with a combination of structured questions and multiple choice items.

Paper 3 is divided into two sections. Section A is compulsory and covers Practical skills and data analysis, while Section B focuses on the Engineering Physics optional topic. This paper lasts two hours, is worth 80 marks, and contributes 32% to the final A-Level grade. It includes 45 marks for practical and analytical questions, and 35 marks for the optional topic.

Who should I contact for more information?

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