

Physics

Cambridge International
Examinations Syllabus
Code 9702

IGCSEs needed

Students will need to have an IGCSE grade of **A*, A or B** or its equivalent in Physics and Mathematics.

Course Overview

Universities value learners who have a thorough understanding of key concepts in physics, an in-depth knowledge of the most important themes in physics and strong practical skills. Cambridge International AS and A Level Physics helps learners develop the knowledge and skills that will prepare them for successful university study. Our learners also develop lifelong skills of scientific enquiry, confidence in technology, and communication and teamwork skills.

Syllabus Units/Topics

Candidates for Cambridge International AS Level Physics study the following topics:

Physical quantities and units	Waves
Measurement techniques	Superposition
Kinematics	Electric fields
Dynamics	Current of electricity
Forces, density and pressure	D.C. circuits
Work, energy and power	Particle and nuclear physics
Deformation of solids	

Candidates for Cambridge International A Level Physics study the AS Level topics, including some topics in further detail, and additionally study the following topics:

Motion in a circle
Gravitational fields
Ideal gases
Temperature
Thermal properties of materials
Oscillations
Communication
Capacitance
Electronics
Magnetic fields
Electromagnetic induction
Alternating currents
Quantum physics

Physics

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Assessment Details

Component	Weighting	
	AS Level	A Level
Paper 1 Multiple Choice 1 hour 15 minutes This paper consists of 40 multiple choice questions, all with four options. All questions will be based on the AS Level syllabus content. Candidates will answer all questions. Candidates will answer on an answer sheet. [40 marks]	31%	15.5%
Paper 2 AS Level Structured Questions 1 hour 15 minutes This paper consists of a variable number of questions of variable mark value. All questions will be based on the AS Level syllabus content. Candidates will answer all questions. Candidates will answer on the question paper. [60 marks]	46%	23%
Paper 3 Advanced Practical Skills 2 hours This paper requires candidates to carry out practical work in timed conditions. The paper will consist of two experiments drawn from different areas of physics. The experiments may be based on physics not included in the syllabus content, but candidates will be assessed on their practical skills rather than their knowledge of theory. Candidates will answer both questions. Candidates will answer on the question paper. [40 marks]	23%	11.5%
Paper 4 A Level Structured Questions 2 hours This paper consists of a variable number of questions of variable mark value. All questions will be based on the A Level syllabus but may require knowledge of material first encountered in the AS Level syllabus. Candidates will answer all questions. Candidates will answer on the question paper. [100 marks]	–	38.5%
Paper 5 Planning, Analysis and Evaluation 1 hour 15 minutes This paper consists of two questions of equal mark value based on the practical skills of planning, analysis and evaluation. The context of the questions may be outside the syllabus content, but candidates will be assessed on their practical skills of planning, analysis and evaluation rather than their knowledge of theory. Candidates will answer both questions. Candidates will answer on the question paper. [30 marks]	–	11.5%

Skills Developed

1. Knowledge and understanding

Candidates will be able to demonstrate knowledge and understanding of:

- scientific phenomena, facts, laws, definitions, concepts and theories
- scientific vocabulary, terminology and conventions (including symbols, quantities and units)
- scientific instruments and apparatus, including techniques of operation and aspects of safety
- scientific quantities and their determination
- scientific and technological applications with their social, economic and environmental implications.