



Physics

Exam Board: Edexcel

A Level



Physics A Level

The course follows the Edexcel specification and looks at trying to understand the physical world and to be able to identify patterns and therefore predict interactions. The course is presented through a large amount of practical work where possible in an attempt to try and combine the theoretical with the practical and allow pupils to learn through their own experiences. This practical aspect also enables students to gain experience of practical work and assists them with their own problem solving skills. The theory is put into direct context in a variety of applications, ranging from the mechanics involved on a sports playing field to the understanding of relativity through muons dying in our atmosphere.

Physicists embrace the challenge of understanding the nature of the Universe from the incredibly small, in the form of subatomic particles that make up the fundamental building blocks of all matter, to the incredibly large, in the form of star formation, and the origins of the Universe.

Physics is a crucial subject for anyone wishing to pursue a career in applied science, technology or any aspect of engineering and of course those who wish to study physics at University. It is also ideal for anyone who has an interest in understanding why and how things happen. This course supports the following range of careers: Research, Industry, Teaching, IT, Medicine, Finance, Marketing, Business and Management.

Entry requirements

Most students would be required to have a minimum of a grade 7 in Combined Science or separate Physics GCSE.

Numeracy skills are essential for all science A levels so a grade 6 or higher at GCSE Maths.

Literacy skills are also of important (writing, analysis and logical reasoning). A grade 6 or above in GCSE English Language is required.

A Level Course Specification

Paper 1 - Advanced Physics 1

- Mechanics
- Electric Circuits
- Further Mechanics
- Electric and Magnetic Fields
- Nuclear and Particle Physics

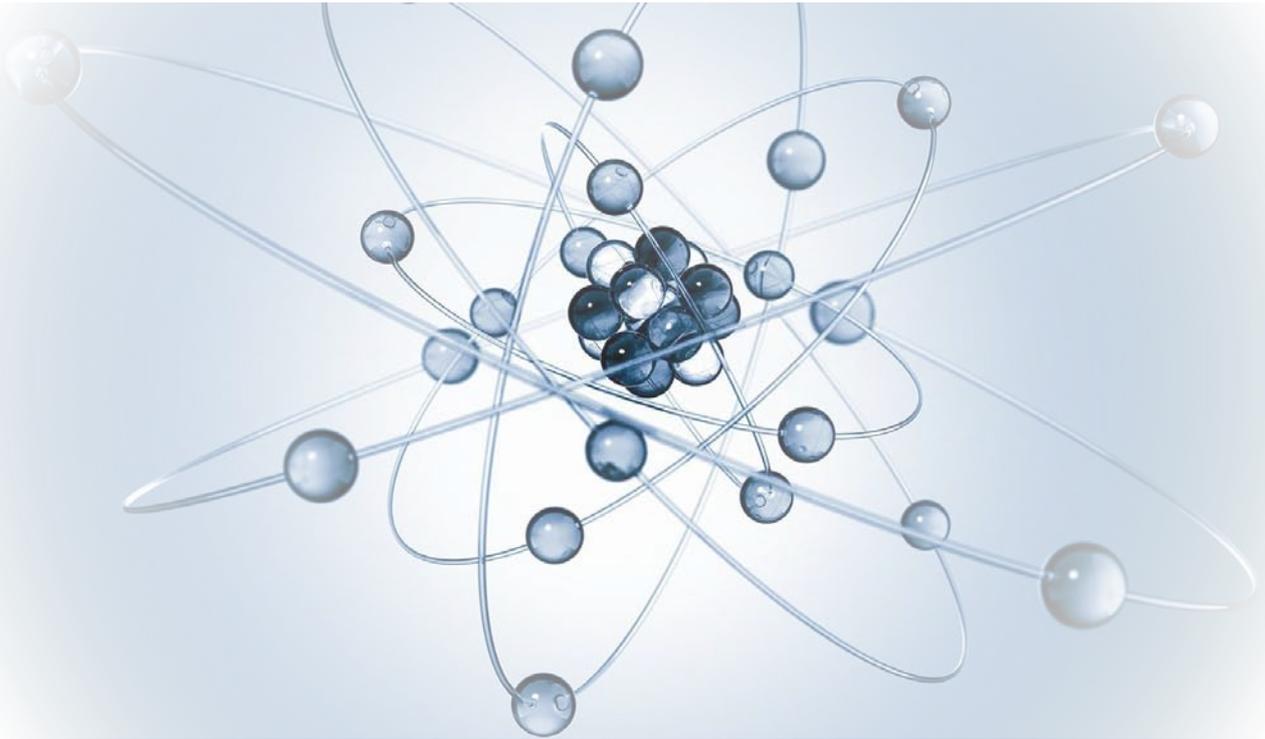
Exam:

1 hour 45 minutes

90 Marks

30% of total A Level

40% or above is based on Maths

**Paper 2 - Advanced Physics 2**

- Materials
- Waves and Particle Nature of Light
- Thermodynamics
- Space
- Nuclear Radiation
- Gravitational Fields
- Oscillations

Exam:

1 hour 45 minutes
90 Marks
30% of total Year 2
40% or above is based on Maths

Paper 3 - General and Practical Principles in Physics

Questions in this paper may draw on any of the topics in this specification. The paper will include synoptic questions that may draw on two or more different topics. For example, a question could ask students to compare electric fields with gravitational fields. The paper will include questions that assess conceptual and theoretical understanding of experimental methods (indirect practical skills) that will draw on students' experiences of the core practicals.

Exam:

2 hour 30 minutes
120 Marks
30% of total A Level
40% or above is based on Maths

All three papers may include multiple-choice, short open, open-response, calculations and extended writing questions

This course combines well with mathematics, chemistry, biology and business studies.

