physics

A Level Physics
Awarding Body: AQA

Course content

Physics is a wide-reaching discipline, studying the complex interactions between matter, energy, and their related subjects, forces, space, and time. Practically, at A Level this wide reaching subject is presented as developing the skills to recognise and answer fundamental questions about the way the world works. In year 1 students will begin by studying the fundamentals of working as a physicist, and then move on to studying mechanics and dynamics, electrics, materials, and wave mechanics, including a large unit on quantum mechanics and the dual nature of light. In year 2 students will expand their study into electric, magnetic, and gravitational fields; nuclear radiation and particle physics, thermodynamics, and simple harmonic motion.

Assessment:

The qualification is assessed by three written exams, and includes a practical endorsement:

Paper 1 includes:

Advanced mechanics,
electric and magnetic fields,
advanced electrics,
nuclear and particle physics.
This paper is assessed in 90 marks / 105 minutes.

Paper 2 includes:

Thermodynamics,
space and gravitational fields,
nuclear radiation oscillations.
This paper is assessed in 90 marks / 105 minutes.

Paper 3 includes:

General questions assessing topics from both years.
Experimental methods (including questions on core practicals).
This paper is assessed in 120 marks / 150 minutes.

The Practical Endorsement includes:

16 core practicals, spanning the two years of the course.
These practicals form the core of the A Level qualification, as a measure of student's practical skill and understanding of course material.
Assessed over two years in a separate practical logbook.

Progression:

Pursuing Physics opens a surprising number of options. Physics has historically been one of the foundations for the fields of Engineering, Material Science, Medicine, Power and Infrastructure work, Aviation, IT, Automotive Research, Aerospace, and Electrical Engineering.
Physics boasts a huge number of areas performing research into the fundamental questions of our universe as well; students will be well equipped to pursue higher education in fields including Laser Engineer, System Analytics, Particle Physics Research, Medical Physics, Forensics, Optical Engineers.

Entry Requirements:

Grade 6 in 2 Science GCSEs, grade 6 in Maths, grade 5 in English is recommended.

Thinking of studying more than one A Level Science, or taking A Level Science with Mathematics?

It is strongly recommended that students who study more than one Science, or who take Science and Maths, have grades 7/8 in GCSE Science and Maths.