

PHYSICS at AS/A2 LEVEL

EXAMINATION BOARD: OCR

WHY STUDY PHYSICS?

Studying Physics develops students' ability to think logically, to apply basic principles to a range of different problems, to carry out and report on practical work and to understand the way in which the world and the universe work. This is an interesting subject to study because it takes students from the everyday to the universal, from the small to the enormous and from the familiar to the unknown. Physics is today at the forefront of scientific development, not least in the search for life elsewhere in the universe and in the quest for better communications and deeper understanding here on Earth.

ENTRY REQUIREMENTS

The Physics course at AS takes as its starting point the Physics topics studied at GCSE, develops these topics further and then introduces new topics, the study of which demands familiarity with the techniques learned earlier. Ideal preparation for the course is a GCSE in Physics studied at Higher tier; a GCSE grade B would normally be the minimum entry requirement. Students who wish to study Physics at AS but who have not completed a GCSE at Higher tier should consult the Head of Department before choosing Physics. There will in such cases be gaps in the student's knowledge that need to be filled, particularly in the early stages of the AS course.

SUBJECT SPECIFICATION

The AS course is divided into three modules, all of which are compulsory:

- Mechanics (forces, motion, energy).
- Electrons, Waves and Photons
- Practical Physics (1).

The A2 course is likewise presented in three modules:

- The Newtonian World (Newton's laws of motion, thermal Physics)
- Fields, Particles and Frontiers of Physics.
- Practical Physics (2).

In both lower and upper 6th, all modules are sat in the summer exam period, i.e. at the end of the respective courses. There is a coursework component which is part of the Practical Physics modules, and which teacher-marked but externally moderated.

THE STUDY OF PHYSICS IS NECESSARY IF YOU WISH TO GO ON TO UNIVERSITY TO STUDY:

1. Pure Physics, Astrophysics, Cosmology, Oceanography.
2. Mechanical, Civil, Nuclear or Electronic Engineering.

... OR TO FOLLOW A CAREER IN:

1. Most disciplines of Engineering
2. Physics (or applied Physics) research or teaching

FURTHER INFORMATION:

Students or parents requiring any further details are most welcome to contact Mr K S Hawkins, Head of Physics.