

Structure & Specification

Year One: AS H158

Year Two: A2 H558

What does the course include?

Year One- AS

Unit One: *Mechanics.*

In this unit you will learn about how and why things move and the effect that forces can have on solid materials. There is also a section on car safety.

Unit Two: *Waves and Photons.*

The first part of this unit is about electricity – how we make sense of circuits and how electricity and magnetism can be combined to make a motor. The second section introduces you to the weird and wonderful world of quantum physics and electromagnetic waves.

Unit Three: *Practical skills in Physics 1.*

You will be assessed on your practical and investigative skills which you will have developed during AS Physics. The three tasks (qualitative, quantitative and evaluative) will be completed in lesson time under controlled conditions.

Year Two- A2

Unit Four: *The Newtonian World.*

This unit is designed to extend your understanding of motion even more, so that you explain why things move in circles and what causes objects to vibrate. Also you will study the behaviour of substances when heated.

Unit Five: *Fields, Particles and the Frontiers of Physics.*

In this unit you will discover electric and magnetic fields, and learn about medical imaging. You will go from the very small - the structure of the atom, to the very large - the universe.

Unit Six: *Practical skills in Physics 2.*

This unit is similar to *Practical Skills in Physics 1* unit in its format of three classroom based practical activities. However the tasks will require a higher level of understanding and explanation.

What are the entry requirements?

You need a good GCSE profile, normally including a grade B in Double award Science (or Physics) and in Maths and a grade C in English Language.

How will I learn?

You will have two teachers and will learn by a variety of activities, including regular tests to ensure you are well prepared for exams. You will take part in group discussions, use ICT, prepare presentations and do plenty of practical work. You will be expected to do a considerable amount of independent study and you may be required to attend extra support sessions in addition to the timetabled lessons.

How will my work be assessed?

AS: Units One and Two are assessed by written examinations in January and June respectively. Unit Three will be assessed internally during the first two terms.

A2: Units Four and Five are assessed by written examinations in January and June respectively. Unit Six will be assessed internally during the first two terms of the second year.

What skills will I need to be successful in this subject?

It is important that you start this course with a real interest in the subject and the motivation to work hard to make sense of the ideas, some of which are quite complex. You need to be reasonably good at maths, particularly rearranging equations and you must be able to express yourself clearly in writing. This is a challenging subject, and you need to be prepared to work hard and put a great deal of effort into developing your understanding of this key science.

What are the opportunities after this course for further/higher education and employment?

Physics is a fundamental science that has a profound influence on all the other sciences. A good understanding of physics is essential for many university courses. It will help you in further study of most science or engineering subjects. The skills learnt in all science A levels are highly regarded by universities and employers, for example in the financial world.