

# PHYSICS

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## SPECIFICATION

A Level      AQA              Physics              7408

## OBJECTIVES OF THE COURSE

A Level Physics takes students into the heart of what is widely regarded as the most fundamental of all sciences. Studying Physics can see students grasping the scope of massive galaxies or probing the tiniest component particles of atoms. Physics is the study of how everything works as well as the basic rules of the universe and is full of challenges and opportunities. It is a problem solving subject at its core.

## CONTENT AND ASSESSMENT

Physics is taught using motivating, up-to-date contemporary contexts. This approach begins with the study of laws, theories and models of Physics and finishes with an exploration of their practical applications. Physics knowledge is rapidly growing and the application of new concepts is leading to developments in Medical Physics, Engineering, Astrophysics and Cosmology and modern technology in general.

During the course students have a two weekly assessment cycle which helps them structure their revision.

A summary of the units of work is shown below:

<b>First year of A Level</b>	<b>Second year of A Level</b>
Measurements and their errors	Further mechanics and thermal physics
Particles and radiation	Fields: Gravitational, Electric and
Waves	Magnetic
Mechanics, energy and materials	Nuclear physics
Electricity	Option Module

- There is no coursework on this course. However, students' performance during a series of required practical experiments will be assessed.
- There are three exams at the end of the two years for A Level, all of which are two hours long. 15% of the marks for A Level Physics are based on experimental techniques developed in students' practical work

## **METHODS OF STUDY**

A variety of teaching methods are employed, such as group and individual work, class discussion, group presentation and practical work. A good knowledge and understanding of GCSE Mathematics is essential for Physics as these skills are used right from the start of the course. Students will also be expected to undertake continuous study outside of lessons where problem solving practice is essential in addition to note taking summarising lesson's work.

## **SPECIAL FEATURES OF THE COURSE**

Various trips and talks take place throughout the year, for example a one day particle Physics Masterclass at Daresbury Laboratory in Cheshire and various lectures at the University of Manchester and other venues. The department is also involved with the Ogden Trust which promotes Physics through various extra-curricular activities.

