

# PHYSICS

Head of department: Dr R M Houchin

Examination board: AQA 7408



RGS



*“If you’re a **logical** thinker who adopts a methodical approach to solving **practical** problems, are intrigued by the tangible world around you, eager to find out more about the mechanics of the **universe** and happy to work as part of a team to find new and challenging ways of understanding concepts, and **challenging** one another’s minds, then a Physics A Level may be right for you.”*



## PROGRAMME OF STUDY

The course will begin with building on some of the topics that will have been covered at GCSE, such as mechanics, waves and electricity. You’ll also be introduced to both particle and quantum physics. More complex mathematical work is then explored, including advanced mechanics, fields, kinetic theory and radioactivity.

Practical work is a key component of the course and there is a list of experiments you’ll undertake alongside other practical sessions. You may find yourself measuring the wavelength of laser light, analysing the penetration of gamma radiation, modelling the potentially damaging mechanical process of resonance or measuring Planck’s constant.

Outside of the classroom, there are a number of field trips and visits to cutting-edge research facilities such as the Large Hadron Collider at CERN in Geneva, Durham University Physics department and Kielder Observatory.

## ASSESSMENT

- Three written papers at the end of the second year.
- The exams will include a mix of long and short answer questions as well as multiple choice problems. You’ll be provided with a formula and data sheet, so it’s less about memory and more about understanding.
- Whilst there is no practical exam, practical work is assessed as part of one of the exam papers. For example, you may be asked to improve an experimental design or plot a graph.

## FUTURE PLANS

Studying Physics gives you access to a wide range of science, engineering and technology degree courses. As you will have developed a range of analytical skills, a Physics A Level will be beneficial to those thinking of studying Economics and Finance related degrees as well as Medicine.

## TO APPLY

Grade 8–9 in Physics at GCSE is highly desirable. As Maths underpins much of Physics, you will be expected to study Maths A Level as well. If you are wanting to take Physics without Maths, please contact the Head of Physics to discuss.