

## Sixth Form Courses

### PHYSICS A-Level

#### Why take this subject?

AQA Physics A-level is an exciting, up-to-date and contemporary physics course and will suit students who possess an inquiring mind and ask “How?” when faced with a new experience. Above all physics is the science that underlies all other branches of science and attempts to explain how everything in the universe works. Physics leads for careers that involve problem solving, technical challenges and understanding and predicting the world around us.

According to [bestcourse4me.com](http://bestcourse4me.com), the top seven degree courses taken by students who have an A-level in Physics are:

- Mathematics
- Physics
- Mechanical Engineering
- Computer Science
- Civil Engineering
- Economics
- Business.

#### What do I need to have studied at GCSE?

Students will have studied additional science or triple sciences at GCSE. All students should have a minimum level 6 grade in their separate sciences or a minimum 66 in their additional science..

Additionally, students should have a minimum of a grade 6 in Maths and 5 English GCSEs.

Students that decided to do A-level Physics should also do A-level Maths to complement the course.

#### What will we study?

A-level Physics lasts two years, with exams at the end of the second year. The table below shows the topics covered in each year.

First year of A-level	Second year of A-level
Measurements and their errors Particles and radiation Waves Mechanics and energy Electricity	Further mechanics and thermal physics Fields Nuclear physics  Two optional units of Astrophysics and Engineering Physics.

#### A-level practical assessment

This is a non- exam assessment component and rewards the development of practical competency for physics and is teacher assessed. Students complete a minimum of 12 assessed experiments covering the technical skills (together with the use of apparatus and practical techniques). Teachers will assess and award a pass to their learners only if they are confident that the learner consistently and routinely exhibits the competencies listed in Section 5h before completion of the A level course.

### **What super curricular opportunities will be available to me?**

There will be plenty of extra curricular opportunities – from guest speakers to lectures, trips and visits. We partake in physics extra curricular activities such as physics of roller coasters at Alton Towers, project work, such as CanSat and building a ground station.

### **What can this subject lead to?**

Studying A-level Physics offers an infinite number of amazing career opportunities including:

- Geophysicist/field seismologist
- Healthcare scientist, medical physics
- Higher education lecturer
- Radiation protection practitioner
- Research scientist (physical sciences)
- Scientific laboratory technician
- Secondary school teacher
- Meteorologist
- Structural engineer
- Acoustic engineer
- Product/process development scientist
- Systems developer
- Technical author.

You can also move into engineering, astrophysics, chemical physics, nanotechnology, renewable energy and more, the opportunities are endless.