

A-level Physics

Board and Specification: **OCR A-level Physics A H556**
Head of Physics: **Miss S Reynolds** (s.reynolds@cwlc.email)
Head of Science: **Mr S. Howie** (s.howie@cwlc.email)

Subject specific entry requirements:

- Separate Science, must have a grade 6 in Physics, with at least two grade 5s in the other sciences
- Grade 7-6 in Combined Science where Separate Science is not taken
- Grade 5 in English Literature and/or English Language
- Grade 6 in Mathematics (Students MUST be fluent in both their numeric, algebraic and trigonometry skills from GCSE Mathematics).

What skills are required of students?

Strong mathematical skills, practical skills; including planning, implementing, analysis and evaluation.

Course outline:

As an A-level Physics student you will further develop the practical skills gained at GCSE. You will undertake the following topics: foundations in physics, forces and motion, electrons, waves and photons; Newtonian world and astrophysics, particles and medical physics.

A-level Physics will teach you the basic principles of the science, giving you a wide range of knowledge into the guiding forces of the universe; including velocity, acceleration, force, mass and energy. These forces can be applied to the motion of all objects, i.e. electrons, athletes, animals or even plants.

Support will be given with more than one teacher available to explain these new concepts in a different way that may aid understanding.

Small groups should allow teachers to offer regular individual help during lessons.

Modules titles and codes: A-level in Physics (H556)

Module 1 – Development of skills in practical physics

Module 2 – Foundations of physics

Module 3 – Forces and motion

Module 4 – Electrons, waves and photons

Module 5 – Newtonian world and astrophysics

Module 6 – Particles and medical physics

What kinds of work will you do in class and at home?

- As a student of physics, you will gain a wide range of skills through practical work integrated with theoretical study; and you will be assessed through written papers.
- Practice past paper questions and examination of associated mark schemes.
- Assessment will be through written papers.
- Students will be encouraged to read more widely into the subject with provided “fact sheets”, which will provide interesting applications of concepts studied in class.
- Support will be given with more than one teacher being available to explain these new concepts in a different way that may aid understanding.
- Small groups will enable regular individual help during lessons.

What other A-levels does your subject connect well with?

Mathematics, Chemistry and Biology.

What types of university course will be helped by this A-level?

Having an A-level Physics is very impressive in a variety of ways, offering you access to a huge range of options for both further education and careers. A-level Physics is highly respected as a qualification and it can open doors to a number of possibilities.

Possible career options with an A-level Physics qualification include: architecture, astrophysics, food scientist, climatologist, radiographer, ergonomics expert, medical physicist, theoretical physicist, geophysicist, chemist, oceanography, naval architect, nuclear physicist, audio technician and orthoptist, to name but a few.

There are a huge range of careers where A-level Physics is highly desirable, not to mention the engineering possibilities, such as flight, design, mining, medical, electrical/electronic, mechanical, aeronautical and agricultural.