



# Physics

## Is this course for me?

This course will appeal to those students who:

- Are willing to think around problems
- Have an interest in all of the science subjects
- Enjoy the challenge of using scientific knowledge in new situations
- Enjoy carrying out practical science.

## Units of Study

### Foundations of Physics

- Physical quantities and units
- Scalars and vectors
- Measurements

### Forces and Motion

- Motion
- Materials
- Forces in action
- Newton's laws of motion and
- Work, energy and power
- Momentum

### Newtonian World and Astrophysics

- Thermal physics
- Gravitational fields
- Circular motion
- Astrophysics
- Oscillations

### Electrons, Waves, and Photons

- Charge and current
- Waves
- Energy, power and resistance
- Quantum physics
- Electrical circuits

### Particles and Medical Physics

- Capacitors
- Nuclear and particle physics
- Electric fields
- Medical imaging
- Electromagnetism

### Practical Skills in Physics

Develops practical and investigative skills within contexts encountered during Physics. This practical skills unit is teacher assessed and externally moderated.

## Entry Requirements

Level 6 or above in both GCSE Physics and GCSE Combined Science, or level 6 or above in GCSE Physics. level 6 in GCSE Mathematics is also required.

## What will this course prepare me for?

Students with AS or A level Physics have a very valuable qualification that can form the basis for any degree in a scientific discipline. Physics combines well with Maths as an excellent basis for a degree in any of the engineering disciplines: Electrical, Electronic, Mechanical, Civil, Chemical. It is also a good subject for Medicine and Architecture. The numerical, analytical and problem-solving skills you develop in Physics are recognised as very useful for careers in Accountancy and Computing.