

PHYSICS

Course Overview for Years 12 -13

DETAILS OF COURSE

Students are strongly advised to take A-Level Mathematics (Mechanics) with A-Level Physics.

Physics is the study of the natural world around us. It is about understanding the laws and properties of matter and energy. The content of the course is chosen to provide a balanced and coherent study of the subject. There are regular internal assessments by means of end of topic tests and thorough revision using past papers in preparation for module examinations.

For AS Physics:

- Motion, Forces, Work and Energy
- Materials
- Electrical circuits
- Wave Behaviour and Quantum Physics
- Practical Skills

For Advanced level Physics:

- Momentum and Circular Motion
- Fields, Electromagnetism and Oscillations
- Thermal Physics
- Nuclear Physics and Fundamental Particles
- The Big Bang Theory

ASSESSMENT:

AS: Paper 1 and Paper 2: both written papers. Both papers assess content from all modules.

A Level: Paper 1, Paper 2 and Paper 3: all written papers. Practical Endorsement for Physics (non-examined assessment)

QUALITIES AND COMMITMENT EXPECTED FROM THE STUDENT:

- A logical and numerate way of thinking
- Good writing skills to communicate unusual ideas in clear English
- An interest in the behaviour of the physical world around you
- The ability to think and contribute to lessons
- A wish to 'read around' the subject

THE FUTURE:

Gaining physics qualifications can lead to a wide range of careers in a number of fields. Many Universities link physics with other subjects as well as offering physics degrees.

TERM	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
YEAR 12	Development of practical skills Charge and current Energy, power and resistance Quantities, units and measurements Nature of quantities Motion		Electrical circuits Waves Forces in action Work, energy and power		Quantum Physics Practical skills for A2 Materials Newton's laws of motion	
YEAR 13	6.1 Capacitors 6.2 Electric fields 6.3 Electromagnetism 5.1 Thermal physics 5.2 Circular motion 5.3 Oscillations		6.4 Nuclear and particle physics 6.5 Medical imaging 5.4 Gravitational fields 5.5 Astrophysics and cosmology		Revision Programme	A-Level Exams