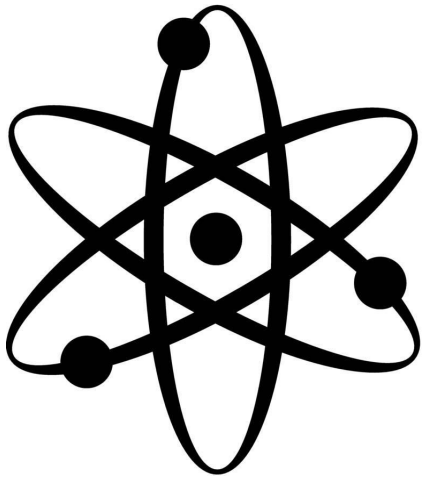
GCE Advanced Level Physics



GCE Advanced Level Physics

Description:

The aims and objectives of the Edexcel GCE Advanced Physics are to enable students to:

- Develop interest in, and enthusiasm for physics.
- Develop an interest in further study and careers in physics.
- Appreciate how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society.
- Develop and demonstrate a deeper appreciation of the skills, knowledge and understanding of how science works.
- Develop essential knowledge and understanding of different areas of physics and how they relate to each other.

A Level Physics provides opportunities for the development of the key skills of communication, application of number, information technology, working with others, improving own learning and performance and problem solving.

Career paths:

- Acoustics, Aeronautical Engineer, Agricultural Engineer Air Traffic Controller, Airline Pilot, Archaeologist Architect, Astronomer, Audio Engineer, Broadcasting, Cartographer, Chartered Surveyor, Civil Engineer Climatologist, Clinical Scientist, Computing, Designer, Doctor, Electrical Engineer

- Energy, Engineering, Environment, Environmental Scientist, Forensic Scientist, Gas Engineer, Geologist, Health Services, Laboratory Technician, Marine Engineering, Mathematician, Mechanical Engineer, Medical Physicist

- Meteorologist, Naval Architect, Naval Career, Nuclear Scientist, Oceanographer, Operational Research, Patent Agent, Patent Examiner, Pharmacist, Radiation Protection, Radiographer, Scientific Officer (Government), Space and Remote Sensing, Teacher, Transport, Water Management.

Entry Requirements:

5 or more GCSE's at grade 5 or above (or BTEC equivalent) including grade 5+ in English and Maths with a 7 (high 6 in some special cases) or higher in Combined Science. Alternatively, if a triple science student then a grade 7 (6 with teacher recommendation) in Physics with 5+ in the other two science subjects. It is also advised that any student taking A-level Physics should also take Maths at A-Level.

Course details & Assessment:

During the course, students will study six modules. These will prepare them for exams to be sat at the end of the course. This will involve practical exams and written answer exams.

- Topic 1 – Working as a Physicist
- Topic 2 – Mechanics including: Motion, Energy and Momentum
- Topic 3 –Electric circuits including: Electrical quantities and Complete electrical circuits
- Topic 4 – Materials including: Fluids and Solid material properties
- Topic 5 – Waves and the particle nature of light Including: Basic waves, The behaviour of waves, Optics and Quantum physics
- Topic 6 – Further Mechanics including: Further momentum and Circular motion
- Topic 7 – Electric and Magnetic fields including: Electric fields, Capacitors and Electromagnetic effects
- Topic 8 – Nuclear and particle physics including: Probing matter, Particle accelerators and detectors and The particle zoo
- Topic 9 – Thermodynamics
- Topic 10- Nuclear radiation
- Topic 11- Gravitational Fields
- Topic 12 – Space
- Topic 13 – Oscillations

Paper 1: Advanced Physics I (01)
Paper 2: Advanced Physics II (02)
Paper 3: General and Practical Principles in Physics (03)
Practical: Science Practical Endorsement (Internally Assessed) (04)*

For more information about Physics see Mrs Cowap-Whiskin
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