

Physics

Examination board – OCR (Physics B – Advancing Physics)

OCR A Level Content: Lower Sixth

- Imaging (lenses; producing, storing and manipulating images; polarisation)
- Signalling (digitising a signal, sampling and sending signals)
- Sensing (electricity, sensors)
- Mechanical properties of materials (describing, testing, looking inside, modelling)
- Wave behaviour (superposition, refraction, interference, diffraction)
- Quantum behaviour (probability, phasors, electron diffraction)
- Space, time and motion (motion, vectors, modelling, momentum, Newton's laws, energy)

OCR A Level Content: Upper Sixth

- Creating models (radioactive decay, capacitors, oscillations, circular motion, gravitational fields and potential, measuring the solar system, cosmology, special relativity)
- Matter (kinetic theory, activation energy, Boltzmann factor)
- Electric and magnetic Fields (electromagnetism, real machines, electric fields, deflection of charged beams of particles)
- Fundamental particles (probing matter, accelerating charged particles, creation and annihilation, electrons in atoms, ionising radiation, stability and decay, fission and fusion)

Assessment

Internal:

- Topic tests, L6 examination, U6 examination (mock)
- Practical Endorsement

External (at end of U6):

- Paper 1 Fundamentals of Physics (2 hours 15 minutes)
- Paper 2 Scientific Literacy in Physics (2 hours 15 minutes)
- Paper 3 Practical Skills in Physics (90 minutes)

GCSE Entry Requirements

We should like students to have achieved grade 7 – 9 at GCSE.

Additional Comments

Two teachers share the teaching of the subject at A-level.

Students have to satisfy the requirements of 'The Practical Endorsement'. This involves students carrying out a number of experiments during the course. Students are assessed by their teachers on whether they have gained a number of key skills.

