



AS/A2 PHYSICS

Head of Department - Mr S. Dow

EXAMINATION BOARD AND SYLLABUS OCR AS (H158) and A (H558)

ENTRANCE REQUIREMENTS GCSE Physics Grade A or Core and Additional Science Grade AA

Physics is about unravelling the complexity of the universe to discover how and why it works. Physics forms the foundation of many technological advances and plays an important role in numerous scientific areas. It is an exciting and challenging field to study, requiring an adventurous and enquiring mind and good mathematical abilities. Its rewards include the deeper understanding of the world around us and the development of skills highly sought after throughout the employment spectrum.

THE COURSE

To a large extent the A Level Physics course covers much the same subject matter as the Physics content of GCSE courses, but the treatment is deeper, more rigorous and challenging. A study of this subject develops powers of analysis and numeracy, together with practical skills and an ability to apply conceptual understanding to novel situations. A good grade at A Level Physics implies a high degree of intellectual capability, of use to employers in many different fields, further education or employment both in terms of content and the level of self-discipline and organisation of work demanded of students.

Students study three modules in Year 12 for AS Physics:

1. Mechanics (G481),
2. Electrons, Waves and Photons (G482),
3. Practical Skills (G483).

To complete the full A level course (AS + A2), in Year 13, students study three more modules:

1. Newtonian World (G484),
2. Forces, Particles and Frontiers of Physics (G485)
3. Practical Skills (G486)

A range of teaching styles and strategies are employed, including traditional 'lecture' type lessons, sessions of individual study and research, practical demonstrations, student practical work, DVD's, computer simulations, etc. Students are expected to make good use of the school resource centre in order to consult a range of further reading material, both in books and online. Deadlines for the presentation of work to be marked must be strictly adhered to. Students will need at all times to have in their possession a reliable and sufficiently powerful electronic calculator, the use of which should be fully understood.

ASSESSMENT

In AS Physics, the first module will be examined in the January with a 1 hour written paper. The second module will be examined by a 1 hour 45 minute written paper. At A2 level, the January exam is 1 hour 15 mins and the second module is 2 hours long. Experimental skills are internally assessed via a three stage practical task (Qualitative, Quantitative and Evaluative) which will be embedded in the taught modules.

USEFUL SUPPORTING A LEVEL SUBJECTS:

Mathematics and Chemistry are useful supporting subjects, though neither is essential.

Non-mathematicians will not be necessarily disadvantaged, although it has to be noted that the attainment of a top grade is unlikely without the ability to perform calculations quickly and accurately.