

SUBJECT: PHYSICS A LEVEL (Linear)

HEAD OF DEPARTMENT:
MRS K ARDLEY
POINT OF CONTACT:
MRS K ARDLEY

SYLLABUS NUMBER:

OCR A Physics H556

SYNOPSIS OF CONTENT

Module 1 Development of Practical Skills in Physics. This involves planning, implementing, analyzing and evaluating investigations.

Module 2 Foundations of Physics. Includes the following topics: physical quantities and units, making measurements and analyzing data, nature of quantities.

Module 3 Forces and Motion. Includes the following topics: motion, forces in action, work, energy and power, materials, momentum.

Module 4 Electrons, Waves and Photons. Charge and current, energy, power and resistance, electrical circuits, waves, quantum physics.

Module 5 Newtonian World and Astrophysics. Covering topics such as, thermal physics, circular motion, oscillations, gravitational fields, astrophysics and cosmology.

Module 6 Particles and Medical Physics. Covering topics such as, capacitors, electric fields, electromagnetism, nuclear and particle physics, medical imaging.

SKILLS THAT WILL BE DEVELOPED

Students will develop:

- The ability to apply key concepts in mathematics.
- The ability to construct, analyse and evaluate scientific methods, explanations and techniques.
- The ability to demonstrate an understanding of scientific facts and concepts.
- An ability to appreciate how society makes decisions about scientific issues.

SOME USEFUL WEBSITES

www.ocr.org.uk

<http://www.iop.org/education/student/index.html>
(Institute of Physics)

<http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html>
(Hyperphysics website)

ASSESSMENT

Paper 1- Modelling Physics -multiple choice questions, structured questions and extended response covering theory and practical skill. (2hrs 15 mins)

Paper 2 -Exploring Physics -multiple choice questions, structured questions and extended response covering theory and practical skills. Questions on material from modules 1, 2, 4 and 6. (2hrs 15 mins)

Paper 3 -Unified Physics – Structured questions and extended response questions on material from all modules. (1hr 30 mins)

Practical skills- non-exam practical endorsement reported separately **pass/fail**. 12 key practical assessments carried out across the course and examined on the written papers.

SPECIFIC MATRICULATION REQUIREMENTS

A **grade B** or higher in GCSE Physics, Core **and** Additional Science. Students **must also** have achieved a grade B or higher in the Physics components of their Core and Additional Science GCSEs.

A **grade 6** or higher in GCSE Mathematics is required.

OTHER INFORMATION

Eg Field Trips/expenses/books

Students are advised on where to purchase the OCR revision guide should they wish to.