

RMGS

Science - **PHYSICS**

A LEVEL (OCR)

What are the aims of the course?

A Level Physics has been developed for students who wish to continue with a study of Physics after GCSE. Such a course will prepare students to progress into further education, to follow courses in Physics, Engineering, one of the other sciences or related subjects, or to enter employment (such as game design or finance) where a knowledge of Physics is highly sought after.

What does it involve?

The OCR Physics A course is followed at A-level (H556) and the specification can be viewed on the OCR website.

The course can be broken down into six modules:

Module 1: Development of practical skills in physics (planning, analysis and evaluative skills are developed throughout the course and numerous experiments are carried out)

Module 2: Foundations of physics (Quantities and units; Derived units; Scalar and vector quantities; Adding vectors; Resolving vectors)

Module 3: Forces and motion (Forces in action; Work, energy and power; Materials; Newton's laws of motion and 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 (Thermal physics; Circular motion; Oscillations; Gravitational fields; Astrophysics)

Module 6: Particles and medical physics (Capacitors, Electric fields, Electromagnetism; Nuclear and particle physics; Medical imaging)

How is it assessed?

- Modelling physics (01) 100 marks 2 hours 15 minutes written paper (37%)
- Exploring physics (02) 100 marks 2 hours 15 minutes written paper (37%)
- Unified physics (03) 70 marks 1 hour 30 minutes written paper (26%)
- Practical endorsement in physics (04)* (non-exam assessment)

Are there any specific entry requirements?

- Students must have a minimum of a level 7 in Physics.
- If students have taken the Combined Science route, they must have achieved a 7-7, and a level 7 in the physics unit.
- In addition, a level 7 in Mathematics is required.
- If students have a Level 2 BTEC, a Distinction and a grade 7 in Maths are required.

Why is it a useful qualification?

The course is a sound preparation for degree-level and other higher education courses in physics and related sciences, and engineering. It is also highly useful for getting onto competitive courses such as medicine, veterinary science and architecture. An A-level in physics is also desirable for diverse fields such as climate science and meteorology, lasers and photonics, medical physics and digital healthcare, robotics and AI, VFX and gaming, and finance and law.