# **Physics**

## What will I need before taking this course?

Two Grades 6 or above in Combined Science. Grade 6 or above in Physics one other Science if you studied separate Sciences at GCSE.

A Grade 6 or above in GCSE English and a Grade 7 or above in Mathematics.

The expectation is that you would also be studying A level Mathematics.

# Assessment and Grading

For A level, there are three examined modules;

- Modelling Physics (Worth 37%) 100 marks (2 hour 15 minutes)
- exam)
  Exploring Physics
- (Worth 37%) 100 marks (2 hour 15 minutes exam)
- Unified Physics (Worth 26%) 70 marks (1 hour 30 minutes exam)
- Practical endorsement in Physics (non exam assessment, reported separately)

All papers are sat in June of Year 13, which count for 100% of the grade. Currently an overall mark of 80% at A level represents a Grade A, a Grade E is 40%, with intervening grades at 10% intervals. (The A\* Grade is available with a 90% score).

# How will I learn?

Lessons involve theoretical and practical activities. A commitment to discussion and study time outside lessons is essential for success in this course.

## What can I do at the end of the course?

Physics lends itself to a wide range of career opportunities including engineering, power generation, medicine, research and development. However, the analytical and problem-solving skills that you will develop will greatly enhance your employment prospects with any organisation.

# What will I learn?

### A Level Course Outline :

The content is split into six teaching modules:

# Module 1 – Development of practical skills in Physics

1.1 Practical skills assessed in a written examination1.2 Practical skills assessed in the practical endorsement

### Module 2 – Foundations of Physics

- 2.1 Physical quantities and units
- 2.2 Making measurements and analysing data
- 2.3 Nature of quantities

### Module 3 – Forces and motion

- 3.1 Motion
- 3.2 Forces in action
- 3.3 Work, energy and power
- 3.4 Materials
- 3.5 Newton's laws of motion and momentum

### Module 4 – Electrons, waves and photons

- 4.1 Charge and current
- 4.2 Energy, power and resistance
- 4.3 Electrical circuits
- 4.4 Waves
- 4.5 Quantum physics

### Module 5 - Newtonian world and astrophysics

- 5.1 Thermal physics
- 5.2 Circular motion
- 5.3 Oscillations
- 5.4 Gravitational fields
- 5.5 Astrophysics and cosmology

### Module 6 – Particles and medical Physics

- 6.1 Capacitors
- 6.2 Electric fields
- 6.3 Electromagnetism
- 6.4 Nuclear and particle physics
- 6.5 Medical imaging

Before beginning the course in September, you would be well-advised to read: Head Start to A Level Physics by CGP.

AWARDING BODY	OCR
CONTACT FOR FURTHER DETAILS	Ms Myrtle—Head of Science