

# Physics A Level



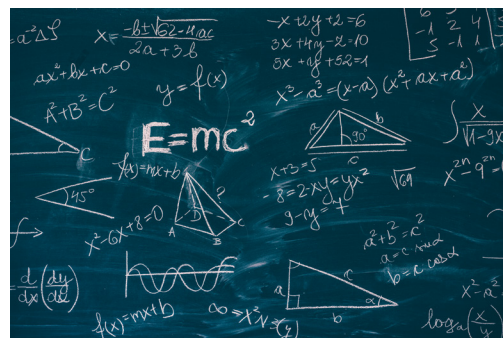
## COURSE DESCRIPTION

A Level Physics at The Grey Coat Hospital covers a broad range of study including mechanics, astrophysics, nuclear physics and electromagnetism.

A full overview of the content and assessment of the course is provided overleaf.

If you enjoy learning about the world around you and how things work then you will very much enjoy this course.

A Level Physics is a highly respected course and can open doors to a huge range of university courses and future careers.



## SKILLS REQUIRED

- Ability to problem solve and think logically;
- Ability to recall information and apply subject understanding to unfamiliar contexts;
- Ability to work with mathematical equations;
- Ability to use a wide range of equipment and techniques, both in the laboratory and in the field;
- Ability to apply investigative techniques, record results accurately and display them in a graphical format;
- Ability to identify and explain trends present in data;
- Ability to undertake independent research;

## HEAD OF SUBJECT

Dr Asmi Barot

## EMAIL ADDRESS

info@gch.org.uk

## EXAM BOARD

OCR

## PROGRAMME OF STUDY

### Modelling Physics

Development of practical skills in physics (M1)

Foundations in physics (M2)

Forces and motion (M3)

Newtonian world and astrophysics (M5)

Exam paper (100 marks)

2 hours 15 minutes

37% of total A Level

### Exploring Physics

Development of practical skills in physics (M1)

Foundations in physics (M2)

Electrons, waves and photons (M4)

Particles and medical physics (M6)

Exam paper (100 marks)

2 hours 15 minutes

37% of total A Level

### Unified Physics

All modules (M1-M6) are assessed

Exam paper (70 marks)

1 hours 30 minutes

26% of total A Level

## EXAMINATION RESULTS

In 2023, students achieved 20% A\* to A 50% A\*-B grades and 60% A\*-C grades. Across the whole 2023 cohort, 29% of students have progressed onto a STEM-related courses at university. Of the physics cohort 90% are studying physics or engineering courses such as astrophysics, aerospace engineering, electrical engineering and mechanical engineering, 20% are studying computer science and 10% are studying architecture. They are studying at a variety of destinations such as Edinburgh, Kings College London, Bristol, Nottingham, Kingston, Southampton, Sheffield and Brunel.

## PRACTICAL ENDORSEMENT

Students will complete a minimum of 12 practical investigations, including investigating motion, waves, electrical properties, ionising radiation and quantum effects.

Practical skills are assessed in every examination.

## ENRICHMENT ACTIVITIES

We offer a range of trips, including a Year 12 trip to the Physics is Action conference, a visit to the Royal Observatory in Greenwich and talks and virtual tours from CERN and Culham Centre for Fusion Energy.

Students have the opportunity to partake in a physics Olympiad competition where students can demonstrate their talents and be rewarded with recognised certificates and medals. In 2023 20% of the cohort achieved a Commendation, 60% achieved a Bronze medal, 10% achieved a Silver medal and 10% achieved the prestigious Gold medal.

Some Year 12 and Year 13 physicists help the science prefects to plan and run KS4 Physics club to inspire the next generation of physicists.

## FUTURE CAREERS

Studying A Level Physics opens doors to a huge range of future courses and careers and is counted as a 'facilitating' subject by the Russell Group of universities.

For many universities, A Level Physics is a pre-requisite for studying Engineering or Medicine. Students go on to study Automotive engineering, Computer Science, Electronic Engineering, Mathematics, Mechanical engineering and Physics.

Our students have also been awarded positions on a wider range of degree courses, such as Biology, Chemistry and Chemical engineering.

