

Physics

A Level



Overview

Physics is the study of matter and energy, from inside an atom to beyond galaxies, looking for the basic rules on which all Science depends. Students will see Physics at work in a range of situations: from Music and Medicine to Communication and Cosmology, following the Salters Horners context-led approach to Physics.

What goes well with this course?

Maths and Chemistry are the traditional partner subjects, but in fact Physics can be successfully combined with Biology, Computer Science, Music, Music Technology and Philosophy. We also welcome students taking less common subject combinations who have the courage to think independently.

Progression

Physics affects many different areas of modern life and Physics graduates are in

high demand. They have a wide range of career pathways open to them, including:

- Research and Development
- Engineering
- Technical Management
- The City and financial institutions
- Computing and Software Design
- Energy or the Health Service
- Media, Marketing, and Teaching
- Education

Course Content

The teaching units in this context-led course cover all the “core Physics” from more traditional courses, but are based around more modern applications. Topics include:

Year One:

- Sports Performance
- Playing and Recording Music

- Materials e.g. food products
- Powering a Satellite
- Physics in Archaeology
- Medical uses of Physics

Year Two:

- Rail transport
- Communications
- Particle Physics
- Earthquakes and Building Design
- Astrophysics

Educational Experiences

Course Specific Trips, Visits & Experiences

Physics students have the opportunity to take part in a variety of course related experiences. In recent years, these have included:

- A visit to the Royal Observatory, Greenwich. The visit reinforced the final A Level teaching unit which is based on Astrophysics. The visit also aimed to introduce wider aspects of the subject beyond the confines of the syllabus and was also of interest to students considering taking Physics, Mathematics or a related course at university
- The Physics Live! event in London: a day of presentations from a range of speakers including cutting-edge researchers, Physics educators and national figures such as the broadcaster Jim Al-Khalili and the Astronomer Royal, Lord Martin Rees
- The opportunity to take part in the national Physics Olympiad

Assessment

This course is assessed through written examinations. The course also includes a series of compulsory Core Practicals and the exams will test students' knowledge and understanding of these experiments. On completion of the two year course, students receive a Teacher Assessment of Competence in practical work, which will be required for some university courses.

The exam board for Physics is Pearson Edexcel.

Entry Requirements

All students need to have at least five GCSEs at Grade 4 or above (and a satisfactory school reference) in order to be accepted on an A Level/BTEC Level 3 Programme.

In addition, students should meet the following minimum GCSE requirements:

- Grade 6 in Maths (Higher Tier) and either 6 in Physics or 6,6 in Combined Science

Students will enjoy this course and be successful if they:

- Have wide interests (it's a big subject!)
- Have a can-do attitude and aren't put off by set-backs
- Like Mathematics and logical reasoning
- Always want to know WHY
- Enjoy science shown on TV and YouTube

Physics students should enjoy and be good at problem-solving and working with other people. They should be able to calculate with large and small numbers, deal with simple algebra, and use diagrams and other graphics to explain their ideas.