



The Course

- Unit 1: Measurements and their errors**
- Unit 2: Waves**
- Unit 3: Particle Physics and quantum mechanics**
- Unit 4: Mechanics and materials**
- Unit 5: Electricity**
- Unit 6: Further mechanics and thermal physics**
- Unit 7: Fields and their consequences**
- Unit 8: Nuclear physics**
- Unit 9: Optional Topic: Engineering Physics**

Why study Physics?

- Physics is the study of the fundamental laws of nature which underpin the whole universe, from sub-atomic particles through to the motion of galaxies through the cosmos.
- You will study how the world behaves and how the laws of nature operate; develop an understanding of the link between theory and experiment; come to appreciate how Physics has developed and is used in present day society.
- There is a biennial trip (usually a weekend in March) to CERN, Geneva, the largest particle accelerator in the world.



- A qualification in Physics is useful preparation for careers in Engineering, Architecture, Medical Sciences and dozens of other jobs. Physics develops logical and analytical thinking, both of which are highly valued by employers. Recent reports on university options have confirmed that the physical sciences and engineering provide the some of the best career prospects in financial terms.

Practical Work

You will undertake six required practical activities in each year of the course. As the course progresses, you will need to demonstrate your competence in various skill areas to lead to endorsement on your exam certificate. Also, some of your questions on your theory exams will be based on these required practicals. Other practical work takes place, both to train in practical skills and to illustrate the theory you are learning.

Engineering

Although Engineering has many branches, Mathematics plus Physics provide a good base for a wide range of courses. Chemical Engineering requires Chemistry. Most Engineering courses require a strong understanding of Mathematics.

The Exams

Paper 1: Covers the material from the first year of the course and Further Mechanics.

Paper 2: Covers most of the material from the second year of the course.

Paper 3: Covers practical skills, data analysis and the Engineering Physics option.

The papers contain a mixture of long and short answer questions and some multiple choice questions.

What do I need to study Physics?

Students will require Grade 7 in either Physics GCSE or in both Core and Additional Science GCSE, or two Grade 7s in Combined Science, one of which must be Physics. In addition, a Grade 7 in Mathematics would be an advantage.