

Physics



Information for
students and parents

PHYSICS

We follow the Edexcel A-level Physics course which is delivered through firstly introducing the Physics concepts and then applying them to real-life contexts.

Students are taught in a friendly group in well-equipped laboratories. They have many opportunities for hands-on practical work which enhances their scientific understanding of the Physics concepts. They work either individually or in small groups depending on the nature of the activity.

The girls quickly become confident and independent experimentalists, happy to try out new challenges.

ENTRY REQUIREMENTS

This A-level qualification builds on the knowledge, understanding and practical skills that students gained when studying GCSE Physics.

We require a minimum of a Grade 7 in GCSE Physics (or 7:7 in Combined Science) and a Grade 7 in Mathematics.

Students will also need to be able to communicate effectively. This involves being able to plan and carry out experiments, think logically about problems and present clearly structured explanations.

40 % of the marks in A level Physics examinations target Mathematics. Therefore, it is a requirement that students taking the A level Physics are confident mathematicians. However, students are not required to study A level Mathematics.

Mathematical aspects of the A-level course will encourage students to develop skills within the areas of...

- Arithmetic
- Numerical computation
- Handling data
- Algebra
- Graphs
- Geometry
- Trigonometry

ADDITIONAL COURSES

Girls in the Lower Sixth may apply for a place on a Headstart or Smallpeice Trust Course. Headstart is a well-established summer school programme whose aim is to encourage talented students to consider careers in technology-based industries.

Smallpeice Trust provides exciting programmes to promote engineering careers to young people through residential and day courses.

They both provide an opportunity for those interested in Science or Mathematical subjects to spend up to a week at university, prior to making their UCAS applications.

These courses can provide various opportunities such as participating in design, build and test projects, practical problem solving activities, lectures and seminars, discussions with recent graduates, meetings with prospective employers and visits of scientific interests.

COURSE CONTENT

Paper 1	Paper 2	Synoptic and practical unit
<ul style="list-style-type: none">• Mechanics• Electric Circuits• Further Mechanics• Electric and Magnetic Fields• Nuclear and Particle Physics	<ul style="list-style-type: none">• Materials• Waves and Particles - Nature of Light• Thermodynamics• Nuclear Radiation• Oscillations• Gravitational Fields and Space	<p>This will include synoptic questions that may draw on any of the topics in this specification</p> <p>It will also include questions that assess conceptual and theoretical understanding of experimental methods that will draw on students' experiences of the core practicals.</p>
Assessment is 1 hour 45 minutes. (30% of the total qualification)	Assessment is 1 hour 45 minutes. (30% of the total qualification)	Assessment is 2 hours 30 minutes. (40% of the total qualification)

SCIENCE PRACTICAL ENDORSEMENT

In addition to the A-level students are assessed for the Science Practical Endorsement. This qualification is internally assessed and externally moderated by Pearson Edexcel. Students must show practical competency by completing practical tasks throughout the course. This qualification is accumulative. We will give students many opportunities to use relevant apparatus and techniques to develop and demonstrate specific practical skills throughout the two years.



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