Clarendon Academy Sixth Form: Subject Essentials

Fascinating Idea

Best estimates put the number of stars in the observable universe at around 100 sextillion, more stars than there are grains of sand on earth.

Physics

Exam Board: AQA
Specification: A-level Physics (7408)
How am I examined in this subject?

A level Physics is examined through three exam papers and a Practical Endorsement

Paper 1	Paper 2	Paper 3
Assessed: any content from topics 1-5 (year 12 chapters), including relevant practical skills	**Assessed:** any content from topics 6-8 (year 13 chapters), including relevant practical skills	**Assessed:** Practical skills and data analysis Questions on optional topic.
written exam: 2 hours 85 marks 34% of A-level	written exam: 2 hours 85 marks 34% of A-level	written exam: 2 hours 80 marks 32% of A-level
60 marks: a mixture of short and long answer questions 25 marks: multiple choice questions	60 marks: a mixture of short and long answer questions 25 marks: multiple choice questions	45 marks of short and long answer questions on practical experiments and data analysis. 35 marks of short and long answer questions on optional topic.

How are my responses assessed?
During each paper, you are assessed on three assessment objectives:

- **AO1:** demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures
- **AO2:** demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures in a theoretical context, in a practical context, when handling qualitative data and when handling quantitative data
- **AO3:** Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to:
    - Make judgements and reach conclusions
    - Develop and refine practical design and procedures

Practical endorsement: This is a pass/fail based on practical skills and lab book work. A pass grade is essential if you intend to apply for a BSc at university

What will I learn about?

All A Level Physics courses cover the same key core content as set out by Ofqual and agreed with further education institutions. Topics covered are; Particles and Radiation, Waves, Mechanics and Materials, Electricity, Further mechanics, Thermal Physics, Fields and their consequences and Nuclear physics. There is also an optional unit covered.

What do I have to achieve at GCSE to study this subject? You need to achieve at least a grade 6 in either Physics (separate science) or a grade 6/6 in combined science at GCSE in order to study Physics at A-Level.

How could this subject support my future education or career? Physics is a fascinating, interesting and complex subject to study. A level physics is more just a science subject; you will continue to develop skills and knowledge highly prized by universities and employers, whist learning about how the physical world functions and how we describe and explain its phenomena.

How do we support students who are aiming for A/A* grades?

- We encourage our most able students to read widely around the subject. We provide access to scientific journals and texts in order to give our most able students the best opportunities to expand their knowledge beyond the specification.
- Our most able students are strongly encouraged to apply for opportunities offered by top Russell group universities. We will also support students in their applications for schemes such as the Sutton Trust summer school (free subject-specific summer schools at 13 top universities).
- We invite guest speakers from local universities to deliver lectures to our students.
- We provide opportunities for our students to link up with former students who have been successful in their scientific studies and careers. They may use these links to help them prepare for university interviews for example.

How do we support students who are finding this subject difficult?

- We have small class sizes, taught by experienced, well qualified staff.
- We have an excellent VLE where students can access revision resources, practise exam questions and online tutorials. These are particularly useful for students who need to recap on lesson content in their own time and at a slower pace.
- We can provide printed versions of the PowerPoint presentations and other notes we use in lessons for students who experience difficulties with the pace of lessons.
- We provide detailed and helpful feedback on the work that students submit to use and give them the opportunity to improve their work at regular opportunities. This is particularly important for students to improve their exam technique.

Who can I contact if I want to find out more?

Mr Rhys Jones (Head of Science / *A-Level Physics Teacher*): rhj@clarendonacademy.com