

## Physics

If you are fascinated by the world you see around you and wonder how it all works then you should consider studying A-level physics. The course builds on principles introduced at GCSE level but many new, interesting and sometimes strange ideas will also be studied. If you enjoy the challenge of coming to terms with new concepts, then physics is a good choice. These ideas are often abstract, so you must be prepared to think hard, using both logic and intuition. The physics course will teach you to observe, question and (attempt to) explain the nature of the universe that you are a part of, and above all physics will teach you to think.

Prerequisite: Minimum grades 7/A in each of I/GCSE physics and mathematics required. Grades 9/8/A\* in both recommended.

As indicated above, you will need to have achieved a good grade in GCSE physics and have respectable mathematical ability, but you do not have to be studying A-level mathematics.

The subject content of advanced level physics has changed a great deal in recent years. The Edexcel A-level physics specification provides an excellent grounding in the more traditional aspects of the subject, as well as incorporating many contemporary ideas. The course is based on a modular system, as outlined below. The ethical, economic, technological and environmental impact of the applications of physics in the modern world is a key part of the new course, and so debate, questioning and developing informed opinions are central in the development of the subject.

### Summary of course content

L6 topics:       Mechanics, Electric Circuits, Further Mechanics,  
Electric and Magnetic Fields, Nuclear and Particle Physics

U6 topics:       All of the L6 topics above  
Materials, Wave and particle nature of Light, Thermodynamics,  
Space, Nuclear Radiation, Gravitational Fields and Oscillations

All of the A level modules will contain some synoptic assessment, where candidates will be required to draw together knowledge, understanding and skills from different parts of the advanced level course.

### Assessment summary

Unit	Assessment	A-level weighting %
<b>A-level</b>		
Paper 1	June in U6	30
Paper 2	June in U6	30
Paper 3	June in U6	40

Practical work is very important in the study of physics. Students will be taught how to develop the necessary practical skills, and they will be assessed throughout the course over a series of sixteen experiments. This leads to a practical endorsement as part of the A level. Additionally, there is a practical component to the written papers, where students are expected to answer questions on experiments and analyse data.

Physics is highly regarded as an A level. It is needed for many scientific courses and is also an excellent foundation for other disciplines, especially those requiring logic, thought, intuition, practical skills and problem-solving ability. Physics can be studied as a 'stand-alone' subject, in conjunction with another science(s) or mathematics but sits equally well alongside the humanities, arts and languages.

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