

Physics

What does the course cover and what is expected of you?

AS Level

- Particles and Radiation
- Waves
- Mechanics and Materials
- Electricity
- Practical Skills and Data Handling

During the year you will complete 6 practical investigations which will be examined during the summer exams. To obtain the AS qualification you need to pass two 1 ½ hour exams in the summer of year 12.

A2 Level

All of the AS content and:

- Further Mechanics
- Thermal Physics
- Fields and their Consequences
- Nuclear Physics
- An option topic (Astrophysics, Medical Physics, Engineering Physics, Turning Points in Physics, Electronics)

During the two years you will complete 12 practical investigations which will be examined during the summer exams. To obtain the A2 qualification you need to pass three 2 hour exams in the summer of year 13. It is likely that you will also sit the year 12 AS exams so you will gain 2 qualifications in Physics!

You will usually have 10 lessons per fortnight and these are often split between two teachers. Practical work is an important part of the course and you will complete practical investigations in many of your lessons. In addition to lessons, you must be willing to spend 5-8 hours a week outside timetabled lessons to complete written work, to revise etc. There are no field visits, work placements, etc. associated with this course. There are occasional visits e.g. to Rutherford Appleton Laboratories

Where can it take you?

A-level Physics is a recommended or required subject in many university courses including Physics, Applied Physics, Electronics, most Engineering courses (Mechanical, Electrical, Electronic, Civil, Aeronautical, etc.) as well as many medical courses including Dentistry, Health Physics, Radiography, etc. Physicists are heavily involved in hi-tech industries such as computer design and robotics, communications, imaging, etc.

If you are interested in following one of these career paths then A Level options including Physics, Maths and another subject (Chemistry, Further Maths, ICT etc) is recommended.

Entry requirements

You should be enthusiastic about Physics. A good grade at GCSE – preferably 6 or above in Combined Science GCSE or equivalent, and grade 5 or higher in Maths. It would help you if you are also taking A-level Maths, particularly if you are planning to take A2 as well as AS.

Course assessment

At the end of the lower Sixth, examinations will lead to the award of AS-level. Candidates may then continue to study Physics for another year for the award of an A-level.

Exam Board

AQA

Student View

“Physics A Level is challenging but enjoyable. Make sure you learn how to use the equations!”

Teachers Tip

Students at Mary Hare benefit from small group sizes when studying Physics. This means that we can give you more individual help especially during practical work. The Physics labs are set up with an interactive whiteboard, horseshoe shaped desk and Group Aid for teaching and then fully equipped lab benches for practical work at the back of the labs.