HIGHAM LANE
SIXTH FORM

# Physics

# FAQs

What courses should I take alongside Physics?

It is highly recommended that you take A-level Mathematics with A-level Physics as the A-level Physics course has a significant proportion of assumed Maths skills.

Physics makes the world go round, literally!
Physics is the basis of how the world works. Without a basic knowledge of Physics how do you expect to build a house? Wire a plug? Fix a leaky tap? Learn how to drive? Play and study sport?
A good grounding in Physics will set you up for any subject that you wish to study or any career that you are thinking of pursuing. Understanding how things work is fundamental to **any** job and being able to transfer the abstract thinking skills which you will develop in Physics are very desirable in the working world. The ability to think outside of the box as they say!

## Assessment:

A-level 3 x 2 hour exams
· Paper 1: 85 marks – 60 marks of short and long questions and 25 multiple choice questions on sections 1-5 and 6.1 (Periodic motion)
· Paper 2: 85 marks – 60 marks of short and long questions and 25 multiple choice questions on sections 6.2 (Thermal Physics) 7 and 8. (Assumed knowledge from 1-6.1)
· Paper 3: 80 marks

Section A: Compulsory section: Practical skills and data analysis - 45 marks
Section B: Students entered for one of the optional topics 9-13 – 35 marks

## Where next with this course?

Physics is a rigorous and well respected qualification which is highly valued by universities it is also a sort after qualification in the UK. With links to many higher education courses such as Mathematics, all areas of Engineering, Medicine, Architecture and Computing to name a few.

All the technology that surrounds us is based on the principles of physics, so if you are considering working in any area related to technology from music to medicine, or lasers to law – studying physics is an essential first step.

Sixth Form Physics requires a good level of competency with Maths, and we very strongly advise students studying Physics to choose Maths as well.

# FAQs

What are the entry requirements?

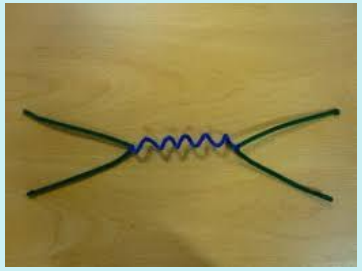
The minimum requirements for A-level physics are 6-6 in Combined Science or a 6 in GCSE Physics.
You are also required to have a minimum of a 6 in Maths although a 7 is preferred due to the nature of the course.

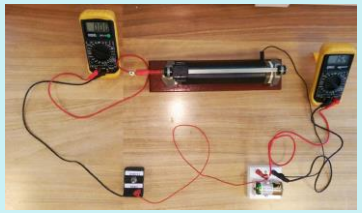
“The important thing is to not stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvellous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day.”

Albert Einstein

“Somewhere, something incredible is waiting to be known”

Carl Sagan





# Year 12 Course Topics

## 1. Measurements and errors

Use of SI units and their prefixes
Limitations of physical measurements
Estimation of physical quantities

## 2. Particles and Radiation

Particles
Electromagnetic radiation
Quantum phenomena

## 3. Waves

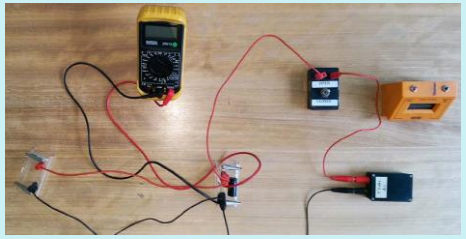
Progressive and stationary waves
Refraction, diffraction and interference

## 4. Mechanics and materials

Forces
Energy
Momentum

## 5. Electricity

Current electricity
Resistivity



# Year 13 Course Topic

## 6. Further Mechanics and thermal Physics

Periodic motion
Thermal physics

## 7. Fields and their consequences

Fields
Gravitational fields
Electric fields
Capacitance
Magnetic fields

## 8. Nuclear Physics

Radioactivity

## Optional Topics

9. Astrophysics – pupils currently taught this topic
10. Medical Physics
11. Engineering Physics
12. Turning points in Physics
13. Electronics

# FAQs

Do I have to have taken triple science?

No.  Any content from triple Physics GCSE will be revisited at A-level.

For more information about courses that are available at Higham Lane Sixth Form, please visit our website