



# DRAYTON MANOR HIGH SCHOOL

## ADVANCED LEVEL COURSE 2022-2024

### Physics

#### Specification AQA

#### Entry Requirements

Grade 7 in Physics GCSE or at least one Grade 7 in Combined Science (ie 76) and a Grade 7 in Maths

Or

Grade 6 in Physics GCSE with a 7 in another Science and a Grade 7 in Maths

#### What do I need to know or be able to do before taking this course?

You will need to have a sound knowledge of GCSE Physics and GCSE Mathematics content. It would be beneficial if you were also taking other Science A Levels and/or Mathematics A Level to complement the course. Practical skills are vital for A Level Physics and you should be able to plan and carry out experiments efficiently. Communication is crucial in Physics so you will need to be able to articulate effectively, be able to research and critically think about problems. Above all, you should have a real interest in the subject and be willing to work hard.

#### What will I learn?

Essential knowledge and understanding in physics that will allow you the opportunity to study it further.

Skills needed for the use of this knowledge and understanding in new and changing situations where appropriate.

An understanding of the link between theory and experiment.

An appreciation of how physics has developed and is used in present day society.

How physics links with social, philosophical, economic, industrial and environmental matters.

An understanding of how mathematical expressions relate to physical principles.

Study how scientific models develop.

#### How is the course structured?

Unit	Title	Weighting	Assessment Type
1	Particles, Waves, Electricity and Mechanics	34%	Exam
2	Fields, Nuclear and Thermal	34%	Exam
3	Practical Skills and Turning Points	32%	Exam
4	Practical endorsement		Assessed throughout the year

#### What skills will I develop by doing this course?

This course will enable you to develop some key skills, which will be essential to you whatever you go on to do afterwards. The key skills you can develop during this course are

- How to effectively communicate by taking part in discussions about investigations or issues

- Carrying out calculations on the data collected in experiments and investigations
- Internet and academic journal based research
- Using Excel for data analysis of practical data
- Discussing in a group to plan a task such as a plan for an investigation or a presentation to the group
- Increasing independent learning skills using the resources at your disposal
- Planning practical investigations into some aspect of physics to answer a question

### **What kind of student is this course suitable for?**

A level Physics is suitable for students who

- Have a real interest in, and enjoy physics
- Want to find out about how things in the physical world work
- Enjoy applying their mind to solving problems
- Want a grounding in a relevant worthwhile qualification of recognised value enjoy carrying out investigations by the application of imaginative, logical thinking;
- Want to use physics to support other qualifications or progress onto further studies or Employment.
- Taking Advanced Levels in the other Sciences and/or Mathematics or other relevant courses such as Design and Technology and want to take another course that will support their studies

### **What could I go on to do at the end of my course?**

Physics leads on to a wide range of courses and careers. You could go on to use Physics to support other qualifications or progress onto further studies or employment. This could be

- From a Higher National programme (HNC & HND) to degree level
- Courses ranging from Physics, Engineering, Medicine, and many other related programmes
- Employment in the area of radiography, civil engineering, and biotechnology as possible examples

In fact, Physics is recognised as an entry qualification for a wide range of Higher Education courses and employment.