A LEVEL

PHYSICS

WHAT IS PHYSICS?

Physics is the study of the laws that govern our Universe, from the smallest subatomic particle to the Universe itself. The course covers familiar topics such as energy, forces and electricity as well as new, exciting elements including particle physics, nuclear physics and quantum physics.

WHY STUDENTS CHOOSE THIS COURSE

Students choose Physics to try to understand the world around them. Students are often curious about how things work, and able to apply some mathematical understanding to solve problems and equations about many different physics phenomena. Physics students often have found GCSE Physics quite easy, and are looking for a more detailed, more challenging explanation about how the Universe works – if so, this is the course for you.

WHAT STUDENTS CAN DO WITH THIS COURSE

Physics A level leads to many university degree options. Many also require Mathematics A level. This includes Physics, Medicine, Astrophysics, Engineering and Architecture. Physics is also highly sought-after for the problem-solving ability that it develops, so it can also be used to apply for Law, Business and Economics degrees. A Physics degree is highly sought-after and sets you up for a wide range of possible career options. These include Accelerator Operator, Applications Engineer, Data Analyst, Design Engineer, High School Physics Teacher, IT Consultant, Lab Technician, Laser Engineer, Optical Engineer, Research Associate, Software Developer, Systems Analyst, Technical Specialist, Web Developer.

HOW THIS COURSE IS ASSESSED

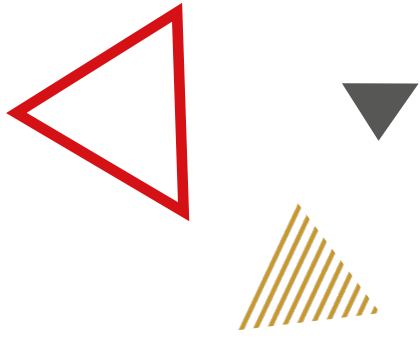
This course is assessed with three two-hour exams at the end of the second year. The papers consist of a mixture of long-answer calculation and explanation questions, multiple-choice questions and questions based on practical work and data analysis. As well as this, all students complete a series of twelve required practical investigations which build up the skills required for practical work at university.

ENTRY REQUIREMENTS

All our course entry requirements are detailed in the Entry Requirements document located in the admissions section of our website.

FURTHER READING

The Institute of Physics guide to studying Physics at A Level: https://www.iop.org/publications/ iop/2015/file_65520.pdf



WHAT THE COURSE COVERS

By the end of the second year, students at Dixons Sixth Form Academy will: Have developed an understanding of the laws of Physics to help to comprehend the nature of the Universe, from the smallest subatomic particles to the Universe itself. This will include an appreciation of SI units, measurement and their errors, and estimation.

Have a conceptual understanding of fundamental topics such as particles and radiation, fields and their consequences and experiments which changed the understanding of physics at the time, which will have been developed through discussion and meaningful practice.

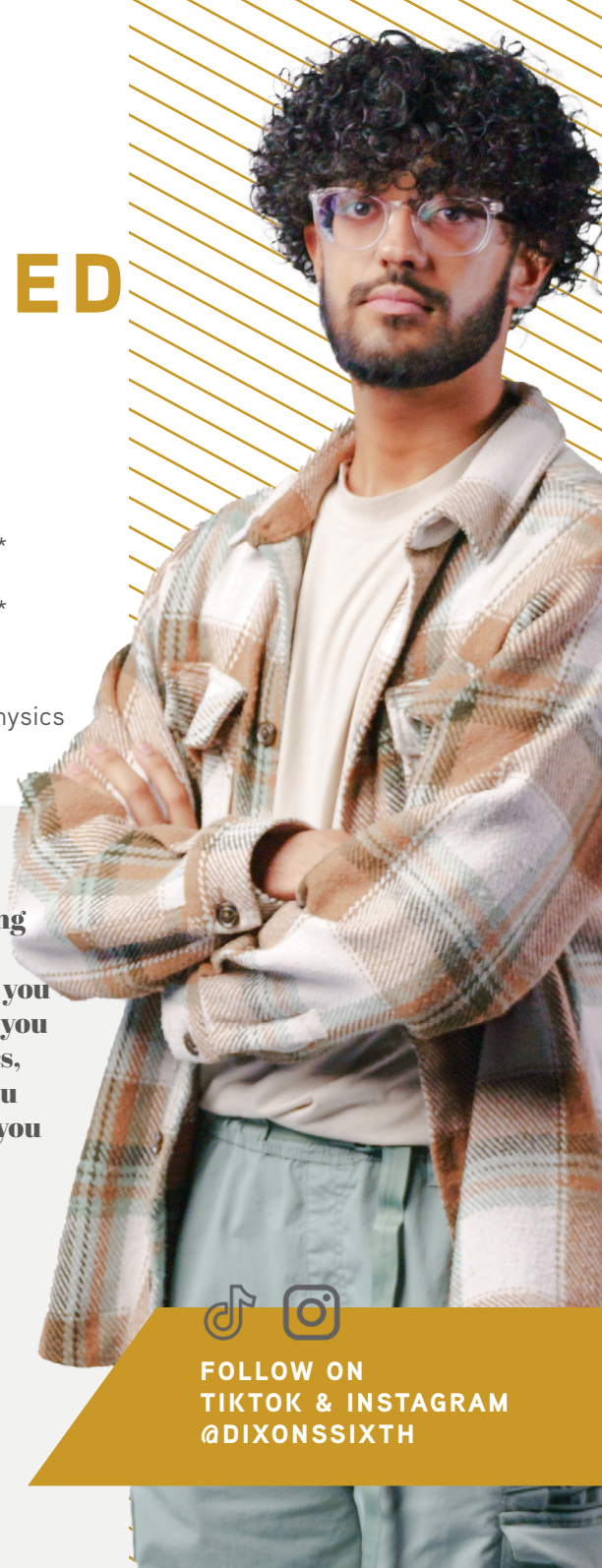
Understand more applied topics such as mechanics and materials, waves, electricity and thermal physics which will help students to understand the world around them. Practical work, demonstrations and everyday examples underpin these topics.

Be able to solve problems independently in a practical context, using and applying the scientific method to their own investigations. They will understand how to use a range of instruments and equipment and have the numerical and mathematical skills to interpret, analyse and evaluate data.

THE COMPLETE SPECIFICATION CAN BE VIEWED ON THE AQA WEBSITE: **WWW.AQA.ORG.UK**

STUDENT PROFILE

ATYAB MOHAMMED



SCHOOL ATTENDED:

Oasis Academy Lister Park

GRADUATED WITH:

A level Physics	A*
A level Chemistry	A
A level Maths	A*

DESTINATION:

Imperial College London studying Physics (with an abroad year)

"It's tricky but utterly fascinating and the breadth of topics is enough to satisfy any wonders you have about the universe. Once you start learning a topic in Physics, you won't want to stop until you know everything! Do Physics, you won't regret it!

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