PHYSICS (AQA PHYSICS 7408 Specification Link (AQA Official))

WHY STUDY A-LEVEL PHYSICS?

Physics is the science that explains *how everything works*. From the smallest particles to the largest galaxies, physics helps us understand the rules that govern the universe. It trains you to think logically, solve complex problems, and use mathematics to describe the real world — skills that are highly valued in **engineering, medicine, finance, computing, and research**.

Studying physics doesn't just teach you facts — it teaches you *how to think*. You'll learn how to analyse evidence, question assumptions, and apply scientific principles to real-world challenges. Whether you're designing a bridge, developing medical technology, or exploring the mysteries of space, physics gives you the foundation to make it possible.

COURSE STRUCTURE

Year 12 (AS Content)

1. Measurements and their errors
2. Particles and radiation
3. Waves
4. Mechanics and materials
5. Electricity

Year 13 (A2 Content)

6. Further mechanics and thermal physics
7. Fields and their consequences
8. Nuclear physics
9. Optional topic (choose one):
    a. Astrophysics
    b. Medical physics
    c. Engineering physics
    d. Turning points in physics
    e. Electronics.

PRACTICAL SKILLS

You'll complete 12 required practicals across the two years.
Your practical endorsement (Pass/Fail) is awarded alongside your A Level grade

ASSESSMENT

Paper	Content	Duration	Marks	Weight
Paper 1	Sections 1-5 + 6.1 (Periodic Motion)	2 Hours	85	34%
Paper 2	Sections 6.2-8	2 Hours	85	34%
Paper 3	Practical skills + Option topic	2 Hours	80	32%

SKILLS YOU WILL DEVELOP

- Problem, solving and critical thinking
- Experimental design and data analysis
- Mathematical modelling
- Logical reasoning and communication of complex ideas

ACADEMIC ENRICHMENT AND TRIPS

- Weekly Physics workshop
- Early Interventions to ensure you achieve the best in your exams
- Oxbridge and Imperial College opportunities
- British Physics Olympiad opportunities
- Imperial and Oxford School Workshops
- Visit to Observatory workshops to support the teaching of the Astrophysics
- Trip to CERN in Year 12 to meet CERN scientists and consolidate learning on the Particle Physics topic
- Many other trips depending on their availability.

