



Post 16 Prospectus: PHYSICS

Advanced Subsidiary (AS) & Advanced Level (A2)

Examining Board: AQA

AIM

To develop essential knowledge and understanding in Physics, the application of Physics and the skills needed to use Physics in new and changing situations. To develop an understanding of the link between theory and experiment and foster experimental skills. To show the importance of Physics as a human endeavour which interacts with social, philosophical, economic and industrial matters.

COURSE CONTENT

AS Level (Stand-alone AS Exam)		Advanced Level (Decoupled Exam)	
1	Particles and Radiation	1	The AS content.
2	Mechanics and Materials	2	Periodic Motion
3	Waves	3	Thermal Physics
4	Electricity	4	Fields and Their Consequences
5	Measurements, Uncertainties and Their Treatments	5	Nuclear Physics
6	Practical Procedures, treatment of uncertainties and Data Analysis	6	Astrophysics* *One of the AQA optional topics.
AS ASSESSMENT		A2 ASSESSMENT	
Paper 1: 1 hr 30 min written paper (70 marks) Short and long answer questions, organised by topic, drawing on all AS content.		Paper 1: 2 hr (85 marks) Written exam drawing on all areas of AS content and Periodic Motion. Short and long answer questions (60 marks) and 25 multiple choice questions.	
Paper 2: 1 hr 30 min written paper (70 marks). Section A: Short and long answer questions on practical skills and data analysis (20 marks). Section B: Short and long answer questions drawing from all areas of AS content (20 marks). Section C: 30 multiple choice questions drawing from all areas of AS content (30		Paper 2: 2 hr (85 marks) Written exam drawing mostly on the topic areas Thermal Physics, Fields and Their Consequences, and Nuclear Physics though any of the content may also be drawn upon.	
		Paper 3: 2 hr written paper (80 marks) Section A: Short and long questions on practical skills and data analysis (45 marks). Section B: Questions on Astrophysics*. Short and long answer questions (35 marks).	
		Practical endorsement. Teacher assessment of skills throughout the course. This does not contribute to the A level grade. Students who pass this assessment will have "pass" attached to the A level grade.	



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SUBJECT ENRICHMENT

Post-16 Physics students have priority places for the enrichment visit to CERN during Challenge & Celebration week. There are many websites and publications catering for those interested in Physics and specifically for those studying Physics post-16.

SUBJECT SPECIFIC ENTRY REQUIREMENTS

Grade 6 or better in Mathematics. Grade 6-6 or better in Combined Science or grade 6 or better in Physics.

A STUDENT PERSPECTIVE

"The things that are covered have an impact on everyday life. It can make you see the world around you in a different light...gives you a great understanding of how a lot of things in the world work...it is challenging and you can find out amazing things."

WHERE NEXT?

Physics students go onto a vast and varied range of pathways post-18 including science and physics-based degrees including medicine, meteorology, natural sciences, engineering and architecture. Physics is a respected 'facilitating' subject for most degree choices including those of a non-science nature. Students have also gone directly into employment and modern apprenticeships rather than choosing a conventional higher education route.

Typical Physics Student Destinations:

- **Students going onto Physics (or Physics with other)**

LEICR	Physics with Space Science and Technology
OXF	Physics (4-year MPhys)
LANCR	Physics, Astrophysics and Cosmology
BATH	Natural Sciences

- **Students going onto Engineering**

MANU	Materials Science & Engineering
NOTTM	Electrical and Electronic Engineering with a Year Abroad
LVRPL	Electrical Engineering and Electronics (4 years)
SHEFD	Mechanical Engineering
HULL	Mech Engineering with Year Abroad
DUR	General Engineering
EDINB	Mechanical Engineering
LEEDS	Mechanical Engineering
OXF	Engineering
LANCR	Engineering (Study Abroad)
CAM	Engineering (4 years)



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SHEFD	Aerospace Engineering with a Year in North America
CAM	Chemical Engineering (via Natural Sciences)
DUR	General Engineering
DUR	General Engineering
LOUGH	Automotive Engineering
MANU	Engineering with an integrated Foundation Year

STUDENT SUPPORT

- Lunch drop-in. Students should come along with questions they cannot do or cannot follow the answers to, or parts of text books, learning grids or Super-Glossaries that they don't follow.
- Learning grids & text books. Students should make sure they can recall and understand key points by using "learning grids" to guide and focus their use of the text book.
- "Super-glossary". For each topic, an overview the specification content and where it comes in the course, and a "super glossary" i.e. a glossary of key terms, and exemplar explanations that are frequently asked for, tips on common language misuse, common algebraic/arithmetic issues arising in those topics.
- Topic Question Packs. These substantial packs of questions are provided, with answers, giving students plenty of opportunity to test their understanding and performance before more formal assessment such as teacher marked homework and tests.
- "Hints" available for problem sheets, allowing students to make progress through problem sheets without necessarily needing a teacher, or other human, to help them.
- Extensive custom-made problems, tasks and support materials focused at stretching most able, "ramping" access into exam standard tasks for those who need it.
- Support resources for Mathematics, such as using trigonometry, radians or logarithms.