

A-level Physics at Latymer



Reasons for taking Physics for A- level

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- ▶ You are good at it and you enjoyed it at GCSE
- ▶ It is very broad in terms of scale and concepts
- ▶ You gain a deeper understanding of how the world around you functions and why certain things happen
- ▶ Allows you to use and develop your mathematical skills and logical problem-solving skills
- ▶ It is necessary for certain career paths
- ▶ To provide variation with your other A-level subjects, contrasting with humanities / essay-based subjects

Entry Requirements



- ▶ GCSE; Physics, Chemistry, Biology single sciences OR Combined Science, (2 grade 7s or better).
- ▶ OCR 21st Century Science is not best preparation (need to do some catch up during the summer)
- ▶ Maths: grade 7 or better
- ▶ A Level maths course? Not essential for A-level Physics, but essential for Physics at university

Starting Year 12



1 teacher for each set and generally 5 Sets of between 15 – 20 students.



General introduction topic on units and prefixes, calculating uncertainties, types of errors, graphical skills



Students will gain practical experience of using unfamiliar measuring instruments.

Mechanics

Materials

Electricity

Waves

**Particles and Quantum
Phenomena**

Practical work

Theory is underpinned by practical experience and investigation throughout the year.

For the A2 course you will complete 12 required practical experiments

CPAC Skills

1. Following written instructions
2. Planning and carrying out investigations
3. Working safely
4. Gathering and recording accurate data
5. Analysing data and researching

GCSE vs A-level

Greater depth of understanding needed

Greater level of precision/accuracy in calculations and explanations required

Greater emphasis on developing practical skills in terms of using unfamiliar equipment, recording and processing data, and doing research

Top grades will require you to apply newly learned concepts in new and unfamiliar contexts

Assessment

Students are formally assessed throughout the year via mid and end-of-topic tests.

Students are informally assessed every lesson via teacher questioning, peer and self-assessment, etc.

AS-level

Assessments

Paper 1

What's assessed

Sections 1–5

Assessed

- written exam: 1 hour 30 minutes
- 70 marks
- 50% of AS

Questions

70 marks of short and long answer questions split by topic.



Paper 2

What's assessed

Sections 1–5

Assessed

- written exam: 1 hour 30 minutes
- 70 marks
- 50% of AS

Questions

Section A: 20 marks of short and long answer questions on practical skills and data analysis

Section B: 20 marks of short and long answer questions from across all areas of AS content

Section C: 30 multiple choice questions

2nd Year Physics

Periodic motion

Fields

Thermal Physics

Nuclear Physics

You will also study one of three Optional Topics :

- **Turning points in Physics**
- **Engineering Physics**
- **Astrophysics**

A-level

Assessments

Paper 1	+	Paper 2	+	Paper 3
What's assessed Sections 1–5 and 6.1 (Periodic motion)		What's assessed Sections 6.2 (Thermal Physics), 7 and 8 Assumed knowledge from sections 1 to 6.1		What's assessed Section A: Compulsory section: Practical skills and data analysis Section B: Students enter for one of sections 9, 10, 11, 12 or 13
Assessed <ul style="list-style-type: none">• written exam: 2 hours• 85 marks• 34% of A-level		Assessed <ul style="list-style-type: none">• written exam: 2 hours• 85 marks• 34% of A-level		Assessed <ul style="list-style-type: none">• written exam: 2 hours• 80 marks• 32% of A-level
Questions 60 marks of short and long answer questions and 25 multiple choice questions on content.		Questions 60 marks of short and long answer questions and 25 multiple choice questions on content.		Questions 45 marks of short and long answer questions on practical experiments and data analysis. 35 marks of short and long answer questions on optional topic.

	2019		2022		2023	
Grade	No. of students	% of students	No. of students	% of students	No. of students	% of students
A*	19	28	29	41	18	33
A* - A	38	57	55	78	30	55
A* - B	55	82	62	87	41	75
A* - C	62	93	67	94	50	91

Recent A-level results

Destinations for those specialising in Physics/Engineering at University

Over 16 students deciding to study a Physics related subject at University:

Physics

Physics with Astrophysics

Aeronautics

Engineering

Mechanical engineering

Destinations for those specialising in Physics/Engineering at University

University destinations include:

University of Manchester

Imperial College London

University College London


King's College London

Southampton

2 students taking Engineering at Cambridge

1 student taking Physics at Oxford

Is A-Level Physics right for you?



Do you enjoy Physics at GCSE, and did you want to learn more?

Are you mathematically minded?

Can you give detailed descriptions and/or explanations using correct scientific language?

Are you hardworking and organised?

Can you work independently?