

Why study Physics?

Physics is the ideal course for those who want to understand how the world works, from the smallest sub atomic particles to galaxies and black holes. Whether you want to understand how formula one cars work and move, how waves affect oil platform installation, why the aurora borealis lights up the night sky or want to help us in our quest for what *actually* makes up most of the universe, physics offers an unparalleled insight.

Physics will help you develop numerical and analytical skills and learn *how* to problem solve. This ease with numbers, computers and an ability to approach a challenging problem opens up more career paths than possibly any other degree: Research, Finance, Strategy Consulting, Oil and Gas, Aerospace, MOD, Meteorology, Medical Imaging, IT, Teaching... the list could go on.

What will you study in Physics?

We have chosen to follow AQA. This is because it is context-free and offers a good range of options. A context free approach means we can tailor our approach to our students, some of whom may benefit from learning through applications of physics and others who may prefer the straight theory.

The options available are:

- Astrophysics
- Medical physics
- Turning points in physics
- Engineering physics (re-branded Applied physics)
- Electronics.

All students will study the full A level but be entered for the AS level exams at the end of the first year . This will give universities a genuine and useful indicator of progress rather than relying on GCSE results, which do not reflect differences between top students.

Why study Physics at Hackney New Sixth Form?

There are three reasons why you should study Physics at HNSF.

- Specialist teachers and technicians - There is a shortage of specialist teachers in STEM subjects in the whole country, and London is no different. At HNSF you will be taught subjects by teachers who actually studied them. The physics teacher studied physics at Imperial College and has taught both

AS and A level in Leicester and Dagenham to classes ranging in size all the way from 8 to 25 students. The level of expertise in our support staff is no different - our technician studied Chemistry at Imperial College.

- New facilities and equipment - Our school was completed in September 2015. This means that all the science labs (and practical equipment) are brand new. With the focus on required practicals in the new specifications, we have invested tens of thousands of pounds over the last few years to ensure our labs are well stocked, with everything from data loggers to infra-red cameras. Come for a visit at the open evening and see some of it for yourself.
- A focus on study skills - Universities have been very vocal over the last few years about how ill prepared they feel new students have been for degree-level study. At HNS you will be taught study skills to help you prepare for university, both in lessons and the way you do homework but also in dedicated slots. We do more than just teach you the content, aware that the two years between GCSE and University is our chance to make sure that bright students are ready for further study.

What are the entry requirements for studying physics at HNSF?

Entry requirements:

A/A* in GCSE Physics or AAA*A* in Core and Additional Science. All students of A level Physics must study A level Mathematics in order to stay on top of the heavy mathematical element of the A level Physics course. Therefore A/A* in GCSE Mathematics.

How will I be assessed?

All courses are now linear. This means you will be assessed by exams at the end of the year. See below for detail of breakdown. There will be no coursework. Instead, there will be 12 required practicals for students to develop skills necessary for those wishing to study physics at university. These skills and knowledge of these practicals will be tested in exam paper 3 (along with the option chosen).

2.3 A-level

Assessments

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