



# Physics - A Level (AQA)

Physics explores our world, from the 'unseen' dimensions of millionths of a metre to 14 billion light years - to the edges of the universe. On the scale we live on, physics is at the heart of technology that changes our lives, bringing us heat, light and communication in ever more ingenious ways. It has brought anti-matter to our hospitals and radioactivity into the pharmacy.

If you find yourself wanting to understand more deeply how stuff works, why we have phenomena like red skies at night or why space junk is a huge issue for our future, then A Level Physics is for you.

The course is taught through hands-on practical work, such as experiments, investigations and demonstrations. You will become familiar with a wide range of measuring methods and equipment, taught in our state-of-the-art laboratories.

This course is available for international students, if you are applying as an international student please click [here](#).

## WHAT WILL I STUDY?

Topics covered in the first year can include:

- Particle physics and we see how this field has led to new technologies in healthcare
- Quantum physics
- Mechanics and an understanding of the forces, motion and energy that are involved in our modern transportation systems
- Light - our probe for understanding the places we cannot reach, supernovae and neutron stars
- Electromagnetic radiation and its wave and particle-like properties
- Electrical energy - including electrical circuits and the components that lie behind our tech-savvy lives

Topics covered in the second year can include:

- Further Mechanics
- Motion in two dimensions: circles and oscillations - you will examine motion close to the speed of light and study the outcomes of special relativity
- Particle detectors and mechanical and electrical devices
- Theories of gases, an area of physical chemistry that enables chemical engineers to design industrial systems, and helps us understand how stars are formed

## WHAT WILL I NEED?

**Start Date:** 2 September 2024

**Duration:** 2 Years

**Attendance:** Full Time

**Location:** Angel Sixth Form College

You will need:

- Grade 5 or above in GCSE English Language
- Grade 7 or above in GCSE Maths\*
- Grade 6-6 or above in GCSE Combined Science (if you are studying GCSE Triple Science, you will need grade 6 in Physics and grade 6 in either Biology or Chemistry)
- A further GCSE at grade 4 or above

\*If you have a Grade 6 in GCSE Maths you can still be enrolled if you pass an entry maths test at enrolment. The topics covered in this test will be rearranging equations, standard form, prefixes, right-angled triangles (Sohcahtoa and Pythagoras), and speed-time graphs. If you pass this test at enrollment, then you will be enrolled on a Maths for Physics class alongside your A Level Physics.

If you wish to study 4 A Levels, you will need 7 GCSEs at grade 7 or above, including two at grade 8.

All applicants must have an interview to confirm that A Levels are suitable for them.

We recommend studying another science or maths subject, such as Biology, Chemistry, Computer Science or Electronics, alongside Physics.

When applying for an A Level programme at City and Islington, please refer to the general entry requirements on our [A Level Courses](#) page as well as the subject-specific details listed above.

## HOW WILL I BE ASSESSED?

Assessment is by practical work and final examination.

## WHAT WILL IT COST?

### SCHOOL LEAVERS

If you will be aged 16, 17 or 18 on 31st August prior to the start date of your course and you have the legal right to remain in the UK for the duration of your programme then your study with us will be free. Please see [here](#) for the documents you will need to show us.

Some courses will have other associated costs, such as for specialist materials and trips. Many of our students are eligible for financial support, see [here](#) for details.

## WHAT CAN I DO AFTER?

A Levels are widely regarded as the standard entry qualification for top universities in the UK, and the rest of the world. Many of our students go on to study for a degree at the university of their choice, with some choosing to progress into apprenticeships or other employment.

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<https://www.capitalccg.ac.uk/candi/course/course-detail/pdf/11480/>