

This course is designed to encourage candidates to develop:

- An awe for the universe
- Excellent problem-solving skills which may lead to new inventions
- Confidence in practical skills alongside understanding of concepts & principle and real-life applications of Physics that surround us in our environment.

### What will you learn?

Physics at A-Level takes students into the Mathematical detail of forces, mechanics, and astronomy. Physics broadens the horizons of learners from understanding the intricacies of the light radiation that illuminates our world and beyond to the stars that make up our universe.

### How are you assessed?

#### Paper 1

2 hour written exam (85 marks) 34% of A-level, 60 marks of short & long answer questions. 25 multiple choice questions on content.

#### Paper 2

2 hour written exam (85 marks) 34% of A-level, 60 marks of short & long answer questions. 25 multiple choice questions on content.

#### Paper 3

2 hour written exam (80 marks) 32% of A-level, short/long questions based on practical experiments and data analysis; this can be on anything from the entire A-level course (except the option section).

### Where will it take you?

This is a traditional academic route which unlocks opportunities in Physics and a full range of engineering courses in university. It is a fact that Physics graduates are amongst the most highly sought after and the best paid after completing their degrees. This course is equally suitable for male or female students.

### Who to talk to?

Please speak to Ms. Sarah Smith, or email [Sarah.Smith@thebourneacademy.com](mailto:Sarah.Smith@thebourneacademy.com)

### What do you need to study this course?

Five or more 9-4 grades at GCSE including English and Maths. A grade 6 or higher in GCSE Physics or combined Science. A GCSE grade 6 in Maths is essential.

### Core content

- Measurements and their errors
- fields
- Electromagnetic Radiation
- Quantum Phenomena
- Waves
- Mechanics
- Materials
- Electricity
- Further mechanics
- Thermal Physics
- Gravitational and Electric Fields
- Capacitors
- Magnetic fields
- Nuclear Physics

### Options in Year 2

- Astrophysics
- Medical physics
- Engineering physics
- Turning points in physics
- Electronics