



# PHYSICS

## Examination Board

- Edexcel

## Year 12 Course

### Content Overview

Five units will be taught in Year 12:

- Unit 1 – Working as a Physicist
- Unit 2 – Mechanics (motion, forces, energy and power).
- Unit 3 – Electrical circuits
- Unit 4 – Materials
- Unit 5 – Waves and the particle nature of light.
- Two mock exams at the end of Year 12, both covering content from all 4 modules.

## Year 13 Course

### Content Overview

- Unit 6 – Further mechanics.
- Unit 7 - Electric and magnetic fields.
- Unit 8 - Particle physics.
- Unit 9 - Thermodynamics
- Unit 10 - Space
- Unit 11 - Nuclear Radiation
- Unit 12 - Gravitational Fields
- Unit 13 – Oscillations

### Assessment Overview

All A Level assessment will take place at the end of Year 13. The assessment consists of 3 exam papers: Papers 1 and 2 are one hour 45 minutes long and will assess all 13 units from the course. Each of these papers contribute 30% to the total assessment.

The 3rd paper lasts for 2 hours and 30 minutes. It may draw on any of the topics in the specification and will include synoptic questions that may draw on 2 or more different topics. The paper will also include questions that assess conceptual and theoretical understanding of experimental methods that will draw on students' experiences of the core practicals. This paper contributes 40% to the total A level grade.

There is a further science practical endorsement for A Level Physics. This qualification will assess students on their use of relevant apparatus and techniques to develop and demonstrate specific practical skills. These skills will be assessed through 12 identified practical activities within each qualification. This assessment outcomes will be reported separately on students' certificates as either 'pass' or 'fail'. To achieve a pass, students must demonstrate that they are competent in all of the practical skills listed in the subject content requirements for physics.



### **Useful websites / reading materials**

#### Websites:

- <http://www.physics-online.com/>
- <http://www.practicalphysics.org/>
- <http://www.alevelphysicsonline.com>
- <http://www.iop.org/>
- <https://www.physicsandmathstutor.com>

#### Books:

- Pearson Edexcel AS/A Level Physics Revision Guide and Person
- Edexcel AS/A Level Physics Revision workbook.
- Physics For You (Johnson, Hewitt, Holt & Miller)
- Edexcel AS/A Level Physics Book 1 (Hudson, M) and Edexcel AS/A Level Physics Book2 (Hudson , M)

#### Periodicals:

- Physics World
- New Scientist
- There are also a wide range of physics books in the Science Faculty which are available.

### **Recommended study**

- At least 5 hours per week on additional activities to include reading around the subject, revision, consolidation of notes and question practice. We actively encourage paired/small group revision as peer support within the Physics group. You are also encouraged to seek clarification and extra help from your Physics teachers as you need it.