



Course Outline

Physics Year 11

Inspiring excellence, empowering global minds

Overview

The Edexcel International GCSE Physics Syllabus followed at GEMS Wesgreen International Secondary School aims to provide students with a comprehensive understanding of the fundamental principles and concepts of physics while encouraging the development of practical skills and scientific inquiry. This internationally recognized qualification prepares students for further study in physics, engineering, and related fields.

Learning Outcomes

The aims and objectives of Edexcel International GCSE Physics qualification are to enable students to:

- learn about unifying patterns and themes in physics and use them in new and changing situations
- acquire knowledge and understanding of physical facts, terminology, concepts, principles and practical techniques
- apply the principles and concepts of physics, including those related to the applications of physics, to different contexts
- evaluate physical information, making judgements on the basis of this information
- appreciate the practical nature of physics, developing experimental and investigative skills based on correct and safe laboratory techniques
- analyse, interpret and evaluate data and experimental methods, drawing conclusions that are consistent with evidence from experimental activities and suggesting possible improvements and further investigations
- recognise the importance of accurate experimental work and reporting scientific methods in physics
- select, organise and present relevant information clearly and logically using appropriate vocabulary, definitions and conventions
- develop a logical approach to problem solving in a wider context
- select and apply appropriate areas of mathematics relevant to physics as set out under each topic
- prepare for more advanced courses in physics and for other courses that require knowledge of physics.

Physics Paper 1
Physics Paper 2

Paper codes 4PH1/1P and 4SD0/1P*
Paper code 4PH1/2P*

Topic Overviews

Term 1

Unit 2 Electricity

Approximate length: 16 hours

The following sub-topics are covered in this section.

- (a) Units
- (b) Mains electricity
- (c) Energy and voltage in circuits
- (d) Electric charge

Unit 6 Magnetism and electromagnetism

Approximate length: 16 hours

The following sub-topics are covered in this section.

- (a) Units
- (b) Magnetism
- (c) Electromagnetism
- (d) Electromagnetic induction

Term 2

Unit 7 Radioactivity and particles

Approximate length: 16 hours

The following sub-topics are covered in this section.

- (a) Units
- (b) Radioactivity
- (c) Fission and fusion

Unit 8 Astrophysics**Approximate length: 16 hours**

The following sub-topics are covered in this section.

- (a) Units
- (b) Motion in the universe
- (c) Stellar evolution
- (d) Cosmology

Textbooks: Pearson Edexcel GCSE (9-1) Physics Student book.

Assessment

Formative: Throughout the chapters, the students will complete end of chapter assessments, quizzes and problem-solving activities which will allow the teacher to assess the students' progress and inform their planning.

Summative: At the end of each term, we will complete internal assessments which will be based on certain units. There will also be Mid-term, End of term and End of year assessments conducted. This allows us to measure the students' attainment throughout the term and year.