

## AICE Physics AS Level

Welcome to AICE Physics AS Level. The course includes the main theoretical concepts which are fundamental to the subject, some current applications of physics, support for mathematical skills, bolstering critical thinking, and a strong emphasis on advanced practical skills. Practical skills are assessed in a timetabled practical examination.

The emphasis throughout is on the understanding of concepts and the application of physics ideas in novel contexts as well as on the acquisition of knowledge. The course encourages creative thinking and problem-solving skills which are transferable to any future career path. Cambridge International AS and A Level Physics is ideal for learners who want to study physics or a wide variety of related subjects at university or to follow a career in science.

This is a rigorous and fast paced applied mathematics course. One efficient way to begin learning physics is to learn the essential jargon ( vocabulary ) and get comfortable with using numbers and looking at material in a brand new way; particularly, knowing how to convert numbers from one set of units to another and rethinking what an equation actually is. It is imperative that you take time to read up on this material with the documents provided. The actual reading portion is fairly short and can be done within one day.

Students are to complete all of the following:

1. Read the following short sections from this open source online college physics textbook:

<https://openstax.org/books/university-physics-volume-1/pages/1-introduction>

You will read and take notes on what you deem is important. The sections that you will read are:

- a) 1.1 The Scope and Scale of Physics
- b) 1.2 Units and Standards
- c) 1.3 Unit Conversion
- d) 1.4 Dimensional Analysis
- e) 1.6 Significant Figures
- f) 1.7 Solving Problems in Physics

All of the sections are indexed on the left side of the website which makes navigation of the reading very easy.

2. Review my notes from class. They consolidate the essential ideas into GoogleSlide presentations. They have been provided below for your convenience.

AICE Chapter 1 – 1.1 and 1.2 Updated

AICE Chapter 1 – 1.2c

AICE Chapter 2 – Measurements

3. Complete the assignment that I have assembled to help test your understanding of the material, *AS Summer Reading Assignment*. **Your solutions will be collected during the second week of school.**

4. Complete the following 25 multiple-choice question practice test, *AS Summer Reading Practice Multiple Choice*. The answer key is provided at the bottom of the document. *Solutions are not provided.* **Your solutions will be collected during the second week of school.**

If you have any questions or concerns regarding the assignment, please email me at [eric.grenda@ocps.net](mailto:eric.grenda@ocps.net).