

# Level 1 Physics – Syllabus

**Teacher:** Mr. Papaleo

**Website:** peterpapaleo.tripod.com

**Email:** papaleop@somerset.k12.ma.us

**Text:** Physics, 7<sup>th</sup> edition, Cutnell and Johnson

John Wiley and Sons, Inc.

## **Materials:**

Textbook

Notebook – Three (3) ring binder (recommended)

Calculator

Writing implement(s)

**Course Description:** This lab program represents a challenging physics curriculum designed for the honors student. It serves as both an informative physics course and as an excellent foundation for further work in mathematics, science, or engineering. Areas of emphasis include the study of kinematics, dynamics, electricity, light and, time allowing, magnetism and atomic structure.

## **Topics Covered:**

Chapter 1: Introduction and Mathematical Concepts

Chapter 2: Kinematics in One Dimension

Chapter 3: Kinematics in Two Dimensions

Chapter 4: Forces and Newton's Laws of Motion

Chapter 5: Dynamics of Uniform Circular Motion

Chapter 6: Work and Energy

Chapter 7: Impulse and Momentum

# Level 1 Physics – Syllabus

Chapter 10: Simple Harmonic Motion

Chapter 11: Fluids

Chapter 16: Waves and Sound

Chapter 18: Electric Forces

Chapter 20: Electric Circuits

Chapter 25: The Reflection of Light: Mirrors

Chapter 26: The Refraction of Light: Lenses and Optical Instr.

Chapter 21: Magnetic Forces and Magnetic Fields\*

Chapter 22: Electromagnetic Induction\*

\* Indicates that these chapters will be covered if time permits.

**Grading System:** A **course specific, weighted grading system** will be applied.

**Tests (60 – 100 pts) 40%:** Tests are given at the end of chapters. They could include multiple choice and free response (problems) questions.

**Quizzes (20 – 30 pts) 25%:** Quizzes can be announced or unannounced and are given to make sure that students are keeping up with the course load. They are either conceptual in nature or a problem type question (from textbook).

**Labs (20- 60 pts) 20%:** Labs are assigned so that students can apply their knowledge of subject matter. Formal lab reports are required for all experiments. See laboratory format handout for more detail.

**Homework (10 pts) 15%:** Homework, which reinforces the material taught in class, will be assigned approximately 3-5 days out of the cycle. It is the responsibility of the student to complete each assignment. Homework will be checked and may be collected (See homework setup/guide). All **answers** will be given the following class period and some of the problems will be explained on the board.

# Level 1 Physics – Syllabus

**Final Exam (~ 180 pts):** A final exam will be given during finals week at the end of the school year. The final is comprehensive (entire year) in nature and multiple choice. An 8.5 x 11, two (2) sided, formula sheet is allowed (student generated – no computer print out or copies allowed).

**Extra Credit:** Extra credit will **not** be offered for this class. Again, it is the responsibility of the student to stay current with the material and ask questions or seek assistance as needed.

**Make-up work:** In accordance with the student/parent handbook, **two days** will be allowed for each day absent except in extenuating circumstances approved by the Principal. Any quiz or exam that is missed will be taken during the class period. All missed assessments need to be completed within **one** (1) week. A **zero** will be given if the assessment is not complete within this time period.

## Homework Setup/Guide:

All homework **must** have the following setup whether or not it is collected.

1. Chapter number and selected problems must appear on the first line in the upper left corner of the paper.
2. Your name must appear on the first line in the upper right corner of the paper.
3. The date must appear on the next line down from your name.
4. Problems must be numbered and have complete solutions.
5. Answers should be circled in order to make them highly visible.
6. Any corrections to explained problems should be done in a different color. This will allow for easy identification of mistakes.
7. All homework needs to be placed in the proper section of your binder when completed.
8. **No late homework accepted!** It is the responsibility of the student to make sure that work has been completed and is ready for collection every day (although it may not be collected in this manner).