

Honors Physics II/AP Physics B 2009 – 2010

General Information

Instructor: Dr. Maritza Tavarez

Text: *Physics*, 6th edition by Giancoli

Recommended Text: Cracking the AP Physics B & C Exams, The Princeton Review

Required Materials: laptop computer, TI-83 calculator, binder w/ dividers, paper, writing instrument

Course Description:

This course is equivalent to a college level, year-long course in Physics. As such it will require considerable effort and time commitment as compared to other high school courses. This class will move fast and part of challenge will be keeping up with the pace. Keep in mind that falling behind is a very difficult obstacle to overcome.

In this course, the concentration will be on a systematic understanding of fundamental physics and physical processes. A strong emphasis will be placed on analytical thinking and developing problem solving skills, where technique will be more important than the answers. Memorization will not be enough to do well in this class. It must be combined with the ability to develop the equations through mastery of the concepts.

Honors vs. AP Option

Regardless of the option chosen, the class will be taught in the same manner and the tests/ assignments will be graded in the same way. All students regardless if they have chosen the AP option or not, will have to come in for additional instruction on 5 additional half days to cover the additional material that will be on the AP Physics B exam.

Once the student has registered for the course named AP Physics B, the student is obligated to sit for the AP Exam in May.

Grading Policy:

Grades will be determined by the total points earned each trimester. Students will be assessed in a variety of ways including tests, quizzes, lab reports, and homework assignments. The breakdown of the grade will be as follows:

Tests 35 % & quizzes 10%

Homework 20 % and lab reports 25%

Class Participation 10%

The Forest Ridge Trimester grading scale is described in the student handbook.

Tentative Schedule:

Trimester I: Newtonian Mechanics

Kinematics in 1 and 2 dimensions (Chapters 1 – 3)
Newton's Laws (Chapter 4)
Work, Power & Energy (Chapter 6)
Momentum & Impulse (Chapter 7)
Circular Motion & Torque (Chapters 5 and 8)

Trimester II: Electricity & Magnetism, Thermodynamics

Waves, Vibrations & Simple Harmonic Motion (Chapter 11)
Electrostatics (Chapters 16 – 17)
Electric Currents (18 – 19)
Magnetism (Chapter 20)
Electromagnetic Induction (Chapter 21)
Thermodynamics (Chapters 13 – 15)*

Trimester III: Waves, Optics, Fluids & Atomic/Nuclear Physics

Waves & Sound (Chapters 11 – 12, 22)
Optics (Chapters 23 – 25)
Fluids (Chapter 10)*
Atomic & Nuclear Physics (Chapters 27 & 30)*
Review

* Saturday or Sunday 1/2 day class