

AP Physics B, 2011-2012

Second Semester Course Syllabus and Assignments

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Reading assignments are from the course textbook, *Principles of Physics* (Kinetic Books, v. 2).
Homework quizzes are on our Moodle course page at hw.mrooms.org.

Unit 6, Part 2: Circuits

Circuits

Reading Assignment 6.3 (27.1, 3-5)

Homework Quiz 6.5

Podcast 6.3: Kirchhoff's Laws

Homework Quiz 6.6

Reading Assignment 6.4 (29.2, 4)

Homework Quiz 6.7

Capacitors

Podcast 6.4: Intro to capacitors

Homework Quiz 6.8

Podcast 6.5: Capacitors in Series and Parallel

Homework Quiz 6.9

*****TEST*****

Practice Problems

Review problems for the quiz from first semester

Chapter 27 5.6

Chapter 29 C.13, C.16, C.17, 3.7, 4.1,
6.1, 7.7, 11.9, 26.3, 28.5

LAB: Kirchhoff's Laws and Resistor Circuits

Unit 7: Magnetism

Magnetic Fields and Forces

Reading Assignment 7.1 (30.1-2, 4)
Homework Quiz 7.1

Reading Assignment 7.2 (31.0-1, 3)
Homework Quiz 7.2

Podcast 7.1: Magnetic Forces
Homework Quiz 7.3

Podcast 7.2: Magnetic Field of a Wire
Homework Quiz 7.4

Induction

Podcast 7.3: Electromagnetic Induction and Flux
Homework Quiz 7.5

*****TEST*****

Practice Problems

Chapter 30

C.9, C.13, C.15, 7.1, 10.5, 10.6, 13.3

Chapter 31

1.1, 3.2, 3.4, 3.11

Chapter 32

5.2, 7.1

LAB: Magnetic Field at the End of a Solenoid

Unit 8: Electromagnetic Waves

Reflection and Refraction

Reading Assignment 8.1 (35.1-5)
Homework Quiz 8.1

Reading Assignment 8.2 (36.0-3)
Homework Quiz 8.2

*****QUIZ*****

Practice Problems

Chapter 34

1.1, C.7 (polarization)

Chapter 36

C.4, 2.4, 3.4, 14.2

Ray Diagrams

Reading Assignment 8.3 (35.0, 6, 8-10, 12-14)

Homework Quiz 8.3

Reading Assignment 8.4 (37.0-3)

Homework Quiz 8.4

Interference and Diffraction

Podcast 8.1: Double Slit Interference Intro

Homework Quiz 8.5

Podcast 8.2: Solving Double Slit Problems

Homework Quiz 8.6

Podcast 8.3: Interference Equations

Homework Quiz 8.7

Podcast 8.4: Thin Film Interference

Homework Quiz 8.8

*****TEST*****

Practice Problems

Review problems for quiz above

Chapter 36 C.4, 3.7, 11.4, 14.1

Chapter 35 C.6, C.7, 16.4

Chapter 37 C.1, 7.3, 7.13

Chapter 38 C.1, C.6, 3.10, 9.3, 12.2

Chapter 39 5.4, 13.3, A.1

[LAB: Snell's Law](#)

[LAB: Wavelength of a Laser](#)

Unit 9: Atomic and Nuclear Physics

Nuclear Reactions

Podcast 9.1: Intro to nuclear reactions

Homework Quiz 9.1

Podcast 9.2: Nuclear reaction example problem

Homework Quiz 9.2

Photons and Quantum Mechanics

Podcast 9.3: Photons and the Bohr Model

Homework Quiz 9.3

Podcast 9.4: Photoelectric effect

Homework Quiz 9.4

Podcast 9.5: Compton Effect

Homework Quiz 9.5

*****TEST*****

Practice Problems

Chapter 40	16.1
Chapter 41	C.2, C.3, 6.3
Chapter 42	C.3, 1.2, 2.3, 4.1, 4.3
Chapter 43	C.3, C.4, C.10, 13.1

Unit 10: Torque and Equilibrium

There are no reading assignments or podcasts for this unit.

After completing unit 10, we will spend the rest of the year reviewing for the AP Exam. You can anticipate a cumulative exam covering the entire year during the review period.