

P221, Physics I, Fall 2005
Course Syllabus

WEEK	DATES	LECTURER	LECTURE TOPICS	READING (HRW)	HW* DUE	QUIZ [§]	LAB
1	8/29 – 9/02	Bossev	Measurements, units; 1-dimensional motion	1.1 – 7; 2.1 – 6	#1	None	Introduction to Labs
2	9/05 – 9	Bossev	Vectors; Motion in 2 and 3 dimensions	2.7 – 9; 3.1 – 7; 4.1 – 3	#2	#1	Using the Lab Computer
3	9/12 – 16	Bossev	Projectile motion and circular motion	4.4 – 9; 5.1 – 5	#3	#2	Introduction to Motion
4	9/19 – 23	Bossev	Newton's Laws	5.6 – 9; 6.1 – 2	#4	None	Vector Addition of Forces
Exam #1: Monday, September 26, 1:25 – 2:15 pm, covering Chaps. 1–5							
5	9/26 – 9/30	Shepherd	Forces and motion	6.3 – 5	#5	None	<u>Uniform Acceleration</u>
6	10/03 – 07	Shepherd	Work and energy	7.1 – 9	#6	#3	<u>Centripetal Force</u>
7	10/10 – 14	Shepherd	Energy conservation	8.1 – 8	#7	#4	<u>The Atwood Machine</u>
8	10/17 – 21	Shepherd	Conservation of linear momentum	9.1 – 9	#8	None	Conservat'n of Energy
Exam #2: Monday, October 24, 1:25 – 2:15 pm, covering Chaps. 6–9.9							
9	10/24 – 28	Bossev	Collisions	9.10 – 12	#9	None	Collisions on Air Track
10	10/31 – 11/04	Bossev	Rotational motion and torques	10.1 – 10	#10	#5	Ballistic Pendulum
11	11/07 – 11	Bossev	Rolling motion and angular momentum conservation	11.1 – 12	#11	#6	Rotational Motion
12	11/14 – 18	Bossev	Gravitation	13.1 – 9	#12	None	<u>Simple Harmonic Motion</u>
Exam #3: Monday, November 21, 1:25 – 2:15 pm, covering Chaps. 9.10–11, 13							
13	11/23 – 25	Thanksgiving Break – no lectures after Monday's exam					
14	11/28 – 12/02	Shepherd	Simple harmonic motion	15.1 – 9	#13	#7	Speed of Sound
15	12/05 – 09	Shepherd	Wave motion	16.1 – 12; 17.1 – 4, 6 – 8	#14	None	None
Final Exam: Friday, December 16, 5:00 – 7:00 pm, SW007, covering Chaps. 15–17 (40%) and 1–11, 13 (60%)							
* Weekly problem assignments are due on Friday, by 1:00 pm, in the indicated bins outside SW132. The assignments will be posted a week ahead of time on the course website.							
§ Quizzes will be given during the first 15 minutes of Friday lectures of the indicated weeks, and will consist of a single problem covering the material from that week's homework assignment.							

Homework Assignments

Homework Assignment #1

Chapter 1: Problems 3,5, 21, 24, 51, 59

Chapter 2: Problems 4, 7, 10, 13

Homework Assignment #2

Chapter 2: Problems 22,31,43,49,56,63

Chapter 3: Problems 19,31,39,49

Homework Assignment #3

Chapter 4: Problems 16, 18, 23, 26, 34, 53, 79, 96, 117, 132

Homework Assignment #4

Chapter 5: Problems 5, 24, 27, 29, 41, 43, 50, 51, 53, 76

Homework Assignment #5

Chapter 6: Problems 8, 15, 26, 30, 49, 52, 57, 77, 89, 105

Homework Assignment #6

Chapter 7: Problems 3, 11, 23, 50, 55, 59, 63, 68, 71, 72

Homework Assignment #7

Chapter 8: Problems 3, 5, 18, 22, 36, 38, 50, 70, 89, 95

Homework Assignment #8

Chapter 9: Problems 7, 16, 22, 44, 50, 54, 60, 79, 104, 116

Homework Assignment #9

Chapter 9: Problems 63, 132

Chapter 10: Problems 7, 17, 28, 29, 32, 39, 42, 54

Homework Assignment #10

Chapter 10, Problems 55, 63, 67, 94, 125

Chapter 11, Problems 2, 7, 8, 22, 81

Homework Assignment #11

Chapter 11, Problems 24, 28, 33, 39, 47, 56, 58, 59, 64, 92

Homework Assignment #12

Chapter 13: Problems 3, 7, 11, 17, 19, 21, 51, 65, 103

Homework Assignment #13

Chapter 13, problems: 60, 100

Chapter 15, problems: 5, 22, 25, 35, 37, 39, 52, 56

Homework Assignment #14

Chapter 16, problems: 6, 23, 31, 51, 75, 89

Chapter 17, problems: 7, 16, 18, 28