

PHYSICS 211L

Fall 2008 Syllabus

Instructor: Dr. Darin Zimmerman
Office: 106 Science
Office Hours: MTR, 1:00 – 1:50 pm, or by appointment
Phone: 949-5746
Email: dtz1@psu.edu

Meeting Time & Place: Lecture Section 1 / **MWF**, 2:00 – 2:50 pm (109 HOLT)
Lecture Section 2 / **MWF**, 3:00 – 3:50 pm (109 HOLT)
Lecture Section 3 / **MWF**, 4:00 – 4:50 pm (109 HOLT)

Textbook: *Physics for Scientists and Engineers: A Strategic Approach*, by Randall Knight (2/e)

Course Description: This is the first course in a three-course sequence. We will cover linear, rotational, and oscillatory motion; the forces and torques that produce such motions; the fundamental concepts of energy and momentum; and gravitation.

Grade Weighting: Homework (10%) + Quizzes (15%) + Labs (20%) + Exam 1 (15%) + Exam 2 (15%)
+ Final Exam (25%)

Letter Grades: Exam scores will be curved and averaged with the other areas and compared to this scale:
A (94-100), A- (90-94), B+ (87-90), B (83-87), B- (80-83), C+ (75-80), C (70-75), D (60-70), F (<60)

Quizzes: We will have weekly chapter quizzes that will be similar to the homework problems. I will drop your three lowest quiz grades. If you miss a quiz for whatever reason (illness, vacation, pet hamster died, etc.) then I will simply drop that quiz rather than “make it up.”

Homework: Homework will consist of both textbook and online problems (Mastering Physics). The online portion will be graded (see grade weighting above). Although the book problems are not collected or graded, I *strongly* suggest you work hard at completing all the homework since it is great practice for the quizzes.

Exams: Exam problems will also be similar to the homework problems. Each exam will typically consist of 4 – 5 problems and the Final will be cumulative. Exams 1 & 2 will be given in lab and must be taken during your regularly scheduled lab time. *There will be no make-up exams except in very exceptional cases.*

Academic Integrity: Cases of academic dishonesty (cheating, plagiarism, fraud, etc.) are very serious will be dealt with according to Penn State University policy. Consequences for such behavior may include receiving a failing grade on the exam or in the course and in more serious cases, permanent expulsion from the University. For the details, see *The Student Guide to University Policies and Rules*.

Class Cancellation: In the event that snow or other inclement weather forces a delay or a closing of the campus, class may be cancelled. If this happens you may call my voicemail number above and I will inform you as to whether or not class is indeed cancelled.

Comments: Traditionally, a course in physics may be the most difficult subject you encounter in your college career. At the same time it can be one of the most interesting (even if you're not a physics major). One key to your success will be to complete all of the assigned homework. Just as with any acquired skill, practice will sharpen your ability to solve the problems.

My mission is to facilitate your learning and provide you with the tools to complete the work. I will try to provide you with an underlying motivation for the topics we are studying that will make the course more interesting and enjoyable for you. I make myself available for help so you should not hesitate to come to my office when you are struggling (come by even if you're not struggling!). You should feel free to approach me with questions and problems - no matter how "stupid" or "simple" you think they might seem.

Physics 211 Fall 2008 Class Schedule (Content coverage is subject to change, exam dates are fixed!)

Homework problems are labeled with a B for book; OL for online; a C next to the number means it is a conceptual problem.

Week	Date	Day	Chapter (topics)	Homework
1	AUG 25 27 29	M W F	1.3 – 1.6; 2.1 (Concepts of motion) 2.2 – 2.7 (Kinematics in 1-dimension)	1: B(C7,7,9,17,33); OL(C4,C8,18,24,28) 2: B(9,17,31,47); OL(C7,2,14,20,60,62,66)
2	SEPT 1 3 5	M W F	<i>Labor Day – no class</i> 3.1 – 3.4 (Vectors); <i>Add/drop deadline</i> Ch. 1 & 2 Quiz	3: B(23,27,37); OL(6,10,14,20,30,34)
3	8 10 12	M W F	4.1 – 4.3 (Kinematics in 2-dimensions) 4.4 (Relative motion) 4.5 – 4.7 (Circular motion) Ch. 3 Quiz	4: B(C5,5,13,25,27,35,49,53); OL(C4,12,16,20,24,44,60,66)
	15 17 19	M W F	5.1 – 5.6 (Force & motion) 5.7; 6.1; Ch. 4 Quiz	5: B(C5,C11,C13,27,33,35,47); OL(C6,C14,2,4,8,10,48)
5	22 24 26	M W F	6.2 – 6.6 (Dynamics along a line) Ch. 5 Quiz	6: B(C7,1,3,11,15,17,31); OL(C16,C22,6,22,26,34,46)
6	29 30 OCT 1 3	M T W F	Ch. 6 Quiz EXAM 1 (Ch. 1 – 6), <i>exam during lab.</i> 7.1 – 7.5 (Newton's 3 rd law)	7: B(C5,C13,7,9,23,29,39); OL(C6,C8,6,20,26,32,36)
7	6 8 10	M W F	8.1 – 8.4 (Dynamics in a plane) 8.5 – 8.7 (Dynamics con't) Ch. 7 Quiz	8: B(C3,5,9,23,31,33,45); OL(C4,C10,16,18,20,36,40,42)
8	13 15 17	M W F	9.1 – 9.2 (Impulse & momentum) 9.3 – 9.6 (Momentum con't) Ch. 8 Quiz	9: B(C7,3,7,11,15,37,59); OL(C12,C14,18,20,24,28,48)
9	20 22 24	M W F	11.2 – 11.5 (Work) 11.6; 11.7 – 11.8 (Work con't) Ch. 9 Quiz	11: B(C5,C7,C11,11,29,33,45,55,63); OL(2,4,8,16,18,30,32,48,68) 10: B(C7,C13,13,21,35,49); OL(C14,6,10,18,24,30,42,54)
10	27 29 31	M W F	10.2; 10.4 – 10.7 (Energy); Ch. 10 & 11 Quiz	
11	NOV 3 4 5 7	M T W F	12.1 – 12.3 (Rigid body rotation) EXAM 2 (Ch. 7 – 11), <i>exam during lab.</i> 12.4 – 12.8 (Rigid body rotation, con't)	12: B(C3,C5,C11,7,17,29,37,45,57,71); OL(C4,2,10,22,64,70,72,88)
12	10 12 14	M W F	13.1 – 13.6 (Gravitation) 14.1 – 14.4 (Oscillations); Ch. 12 Quiz <i>Today is the Late Drop Deadline</i>	13: B(C9,5,17,31,37,59,63); OL(C6,C8,6,14,24,46,50) 14: B(C1,5,9,11,13,19,21,27,49,69); OL(C8,14,20,30,40,44,54,58)
13	17 19 21	M W F	14.6 – 14.8 (Oscillations con't) Ch. 13 Quiz	
14	24 26 28	M W F	<i>Thanksgiving, no class</i> <i>Thanksgiving, no class</i> <i>Thanksgiving, no class</i>	
15	DEC 1 3 5	M W F	20.1 – 20.3 (Waves) 21.1 – 21.3 (Superposition); Ch. 14 Quiz	20: B(C5,5,49,53,55,63); OL(2,12,44,62) 21: B(C1,7,9,11,35,37); OL(C2,2,6,10,40)
16	8 10 12	M W F	<i>Review for final</i> <i>Review for final; Ch. 20 & 21 Quiz</i>	
17	15 17	M W	FINAL EXAM (cumulative)	10:10am – Noon, 117 SCIENCE