

**PHYSICS 212**  
**Summer 2009 Syllabus**

**Instructor:** Dr. Darin Zimmerman  
**Office:** 106 Science  
**Office Hours:** come and see me  
**Phone:** 949-5746  
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**Meeting Time / Place:** MTWR, 10:25a – 12:55p / 210 HOLT

**Textbook:** *Physics for Scientists and Engineers with Modern Physics* (2/e) by Randall Knight

**Course Description:** This is the second course in a three-course sequence. We will study both static and dynamic electric and magnetic fields and the sources of these fields (charge and current, respectively), and elements of basic DC and AC circuit theory, all in the context of Maxwell's equations. Laboratory exercises will follow the course material.

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

**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)

**Homework:** Homework will be assigned and turned in. I will assign a grade based on my assessment of the degree of completion. At times, I may grade one particular problem and base your assignment grade on that problem. I strongly suggest you work hard at completing it since I also base the quizzes on the typical homework problem.

**Quizzes:** We will have chapter quizzes that will be similar to one of the previously assigned homework problems. *There will be no make-up quizzes*; however, I will drop your two lowest.

**Labs:** You must attend *all* the labs and you must pass the lab (60% or better) to pass the course.

**Exams:** Exam problems will also be similar to the homework/quiz problems. Each exam will typically consist of 4 – 5 problems and the Final Exam will be cumulative. ***There will be no make-up exams except in very exceptional cases.*** In terms of illness, an exceptional case is one in which your illness is severe enough that you are under the care of a doctor on the day of the exam. Other examples of exceptional cases would include car accidents, a death in the family, or other unforeseen emergency (something that threatens life or property). In the case of a foreseen illness, you must notify me by email or phone, letting me know of your circumstances. For more information regarding Penn State's class attendance policy, see: [http://www.psu.edu/dept/ufs/policies/separate\\_policy/42-27.htm](http://www.psu.edu/dept/ufs/policies/separate_policy/42-27.htm)

**Academic Integrity:** Cases of academic dishonesty (cheating, plagiarism, fraud, etc.) will be dealt with harshly. 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 212 Summer 2009 Class Schedule** (Always subject to change...)

Week	Date	Day	Chapter: topics (homework problems)
1	June 29	M	26: Electric charge and force (C11, C13, 1, 7, 13, 17, 25, 27, 37, 45, 61, 67) 27: Electric field (C3, C5, 1, 9, 13, 19, 23, 27, 31, 39, 43, 47)
	June 30	T	
	July 1	W	28: Gauss' Law (C3, C5, C9, 7, 9, 13, 19, 30, 35, 39, 41, 43) / <b>Ch. 26 Quiz</b>
	July 2	R	
2	6	M	<b>Ch. 27 Quiz</b>
	7	T	29: Electric potential (C4, C7, C9, 1, 5, 13, 21, 27, 37, 40, 45, 59, 69, 71)
	8	W	<b>Ch. 28 Quiz</b>
	9	R	<b>EXAM 1</b> (Chs. 26 – 28)
3	13	M	30: Potential & field (C4, C6, C13, 3, 4, 9, 11, 15, 21, 25, 32, 47, 61, 67)
	14	T	31: Current & resistance (C8, C9, C11, 3, 13, 22, 27, 35, 45, 53, 59)
	15	W	<b>Lab 1: Capacitance / Ch. 29 Quiz</b>
	16	R	32: Circuits (C3, C4, C11, 1, 6, 10, 13, 17, 21, 23, 27, 33, 42, 46, 50)
4	20	M	<b>Ch. 30 Quiz</b>
	21	T	33: Magnetic field (C5, C7, C9, C13, 7, 13, 17, 21, 25, 27, 35, 39, 43, 47, 48, 58)
	22	W	<b>Lab 2: Magnetic forces / Ch. 31 Quiz</b>
	23	R	<b>EXAM 2</b> (Chs. 29 – 32)
5	27	M	34: Electromagnetic induction (C1, C3, C7, C11, C16, 4, 6, 9, 11, 12, 17, 19, 23, 25, 35, 40, 43, 54, 71, 75, 79)
	28	T	<b>Ch. 33 Quiz</b> / <i>Today is the Late Drop Deadline</i>
	29	W	36: AC Circuits (C2, C3, C5, 1, 7, 15, 17, 19, 25, 31, 43, 45, 47, 49, 51)
	30	R	
6	Aug 3	M	<b>Lab 3: RLC Circuits / Ch. 34 Quiz</b>
	4	T	35: Electromagnetic waves (C5, C7, C10, 9, 15, 19, 21, 25, 31, 32, 38, 43, 47, 53)
	5	W	
	6	R	Review for final / <b>Ch. 36 Quiz</b>
	7	F	<b>FINAL EXAM</b> (cumulative)

UPDATED 06/16/09