

GENERAL PHYSICS II (PHYS 2020)
Fall 2009
Prof Richard Ignace

COURSE SYLLABUS

Meeting 9:45 to 11:05, Tuesday and Thursday, in Brown 370

Instructor:	Richard Ignace Department of Physics & Astronomy
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Office Hours:	11:00-12:00 am, Tues, Wed, Thurs; or by appointment
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Overview:

This is an algebra/trig-based course on second semester physics, dealing with topics of electricity and magnetism, waves, optics, and special topics in modern physics. Although math ability is an important tool for the course, emphasis is placed on concepts and critical thinking pertaining to physics. It is also hoped that you will develop an appreciation for physics and science in general.

Grading:

The course is for 3 credit hours. Scores will be assessed as follows:

- 20% – Homework Assignments
- 20% – 1st Exam
- 20% – 2nd Exam
- 20% – 3rd Exam
- 20% – Comprehensive Final Exam

Exam Notes –

All exams will be closed book, closed notes, and multiple choice, and the final exam will be comprehensive. A calculator will be needed. An equation sheet will be provided. Any make-up exams will be short answer questions or problems. Any cheating will result in an automatic zero score for that exam.

Homework Notes –

Homework will consist of take-home multiple choice questions. So the homeworks double as exam prep. If you do not work hard on the homework, you are not likely to perform well on the exams.

Required Materials:

The text for the course will be *College Physics* by Serway and Faughn. This book covers all topics in basic undergraduate physics; however, General Physics II deals mainly with those chapters in the second half of the book (chaps 13–30). Although little of thermodynamics from Physics I will be needed, students will need to be familiar with material related to earlier chapters on forces and motion. You will need a scientific calculator for this course.

Schedule:

There are 16 weeks in the semester, including finals week. The following is an *approximate* schedule of material that will be covered in the course. A given topic may overrun into the lecture following or begin in the lecture prior; to be safe, attend every lecture!

<i>Week</i>	<i>Date</i>	<i>Topic</i>	<i>Chapter</i>	<i>Homework</i>
1	09/01	Electric Forces	15	
	09/03	Electric Fields	15	
2	09/08	Electrical Energy	16	
	09/10	Capacitance	16	
3	09/15	Current	17	HW#1 Due
	09/17	Resistance	17	
4	09/22	DC Circuits	18	
	09/24	DC Circuits	18	HW#2 Due
5	09/29	Exam #1		
	10/01	Magnetism	19	
6	10/06	Magnetism	19	
	10/08	Induced Voltages	20	
7	10/13	Inductance	20	
	10/15	AC Circuits	21	HW#3 Due
8	10/20	Fall Break		
	10/22	Waves	13	
9	10/27	Sound	14	
	10/29	Reflection/Refraction	22	HW#4 Due
10	11/03	Exam #2		
	11/05	Mirrors	23	
11	11/10	Lenses	23	
	11/12	Wave Optics	24	HW#5 Due
12	11/17	Wave Optics	24	
	11/19	Optical Instruments	25	
13	11/24	Relativity	26	HW#6 Due
	11/26	Thanksgiving Break		
14	11/01	Exam #3		
	12/03	Quantum Physics	27	
15	12/08	Atomic Physics	28	
	12/10	REVIEW FOR FINAL EXAM		HW#7 Due
16	12/17	FINAL EXAM (8:00a-10:00a, Mult. Choice)		

Students with Disabilities: I need to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please see me after class or during my office hours.

Complaint Procedures: In the event of a "complaint", the first step would be to speak with the Instructor. Alternatively one could speak with the Physics and Astronomy Chair in 277 Brown Hall.