

Physics 208 Syllabus — Fall 1993

Prof. Sam Hokin

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Text

The main text is Fishbane, Gasiorowitz and Thornton, *Physics for Scientists and Engineers*. Other texts are available in the Physics Library, and you are urged to use them for a different perspective or different problems. The orange departmental lab manual (\$5.00) will be used. Old exams will be placed on reserve in the Physics Library.

Exams

There will be three non-cumulative one-hour exams in class on Fridays, plus non-cumulative and cumulative halves of the scheduled final exam:

Friday 10/1 Chapters 22-26

Friday 10/29 Chapters 27-31

Friday 11/19 Chapters 33-37

Thursday 12/23 Chapters 38-41 (part 1), Cumulative (part 2).

Bring only a calculator and pen or pencil to the exams. Formulas and constants will be provided on the exam formula sheet, which will be handed out on the Friday before an exam for your use while studying.

Homework

The homework 'problems' (not 'questions') are due on Monday in discussion section. They are meant mainly to urge you to test your understanding and practice solving problems; not all problems from the assigned set will be graded by the TAs. Solutions to the homework will be placed in the reserve shelf in the Physics Library after it is due.

Labs

Labs are a very important component of 208; you will fail if you miss more than one lab. You must make up a missed lab in the same week in a different section; arrange it ahead of time with the TAs. You should use a bound quadrilled lab book, which will be looked over by the TA before you leave the lab. Lab books will be kept in the labs without exception. Lab books will be graded with extra credit awarded for creative work — you are encouraged to deviate from the orange book if you think of something interesting to pursue. The goal of the labs is not to get the "right number" but to approximate experimental physics, in which there are no orange books. You must have a different lab partner each week.

Grading

The student's final grade will be determined as follows:

30% labs

10% homework

36% 3 Friday exams (12% each)

24% non-cumulative and cumulative half of final exam (12% each)

Office Hours

Teaching assistants will have office hours in 2312 Sterling on a schedule announced in class. You are welcome to stop by my office anytime or arrange a meeting with me after class; I have a flexible schedule.

Honors Students and Friday Lectures

Honors students are required to attend the Friday special lectures, which all students are encouraged to attend. Feel free to suggest topics for the Friday lectures. Honors students will be assigned a few special problem sets and a short term paper.

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Week	Day	Date	Ch	Subject	Lab/Topic	Homework
1	R	9/2	22	Electric Charge	no lab	2,7,14
	F	9/3		<i>no lecture</i>		
2	T	9/7	22	cont.	E1	28,31,43,47
	R	9/8	23	Electric Field	Electrostatics	8,11,16,30,41,53,56
	F	9/10		<i>special topic</i>		
3	T	9/14	24	Gauss' Law	E2	7,14,19,34,45,49
	R	9/16	25	Electric Potential	Electric Fields	11,26,37,41
	F	9/17		<i>special topic</i>		
4	T	9/21	25	cont.	E3	48,55,57,69
	R	9/23	26	Capacitance	Capacitors	5,11,16,28,43,50
	F	9/24		<i>CH 22-26 review</i>	and RC Decay	
5	T	9/29	27	Current and Resistance	E4-5	4,13,17,32,41,58
	R	9/30	28	DC Circuits	Null	4,11,14,21
	F	10/1	→	EXAM 1 CH 22-26	Measurements	
6	T	10/5	28	cont.	E6	31,40,52,55,66
	R	10/7	29	Magnetic Force	Measurement	5,14,24,43,51
	F	10/8		<i>special topic</i>	of e/m	
7	T	10/12	30	Magnetic Fields	E8	3,10,23,31,
	R	10/14	30	cont.	Scopes and	44,51
	F	10/15		<i>special topic</i>	Amps	
8	T	10/19	31	Induction	E7	5,14,17,26,
	R	10/21	31	cont.	Induction	31,37,44,48
	F	10/22		<i>CH 27-31 review</i>		
9	T	10/26	33	Inductance	E9	2,14,20,29,40,48
	R	10/28	34	AC Circuits	AC Circuits	1,23,34,43,49,51,56
	F	10/29	→	EXAM 2 CH 27-31		
10	T	11/2	35	Electromagnetic Waves	E10	7,12,24,30,
	R	11/4	35	and Polarization	Microwave	38,45,55,56
	F	11/5		<i>special topic</i>	Radiation	
11	T	11/9	36	Light	L3	5,14,33,38
	R	11/11	37	Geometric Optics	Mirrors and	4,7,11,27,41,42
	F	11/12		<i>CH 33-37 review</i>	Lenses	
12	T	11/16	38	Interference	L1	9,15,22,37,50
	R	11/18	39	Diffraction	Interference	19,30,35,52
	F	11/19	→	EXAM 3 CH 33-37	and Diffraction	
13	T	11/23	39	cont.	no lab	
14	T	11/30	40	Special Relativity	N1	7,19,30,39,
	R	12/2	40	cont.	Radioactive	45,56,59
	F	12/3		<i>special topic</i>	Decay	
15	T	12/7	41	Quantum Physics	L5-7	6,14,22,23,27,
	R	12/8	41	cont.	Spectrometer	35,41,52,57
	F	12/10		<i>Nuclear Physics</i>	and H Spectrum	
	T	12/14		<i>CH 38-41 review</i>	no lab	
	R	12/23		FINAL EXAM 5:05 PM CH 38-41 and CUMULATIVE		