

PHYSICS 2120 Syllabus (Spring 2012)

Liangfeng Sun, PSLB 115, (419) 372-7245, lsun@bgsu.edu

Office hour: 2:30~3:00 PM Tuesday or by appointment

Texts: Fundamentals of Physics, 9th edition (2010), by Halliday, Resnick, & Walker

Laboratory Experiments and Exercises, Physics 2020 and 2120 (2010/11), Boughton

Grading policy

The total grade is the sum of Exam I (10%), Exam II (10%), Exam III (10%), Final (20%), Homework (30%) and Lab (20%). The honors students need to finish two papers during the semester. Each one counts 10%. Their final grades will be scaled back to 100% by dividing them by 1.2. The students will be randomly picked up to show their solutions to the homework (problems or questions assigned earlier) during the recitation section. They will be graded and the top 5 grades will be counted.

Make-up exams are only available to the students with valid reasons according to the university policy.

Cheating is strictly prohibited, and will fail your course definitely.

	Date			Topic	Lab	
1	JAN	10	T	CH 15: SEC: 1-4,6-7	Simple Harmonic Mot. Waves No lab	
		11	W	PROBLEMS-2,6,30,32,42		
		12	R	CH 16: SEC: 1-5,8		
		13	F	PROBLEMS- 3,5,8,9,28		
2	JAN	17	T	CH 16: SEC: 9-10,12-13	Superposition Sound Exp.2:00 (Excel workbook Lab) (complete at home and due by 1/31/2011)	
		18	W	PROBLEMS, 31,43,65		
		19	R	CH 17: SEC: 1-6,9		
		20	F	PROBLEMS- 7,9,16,28,56		
3	JAN	24	T	CH21: SEC: 1-2,5-6	Electric charge Electric Force Exp.2:03 The velocity of sound in air	
		25	W	QUESTIONS-2, 4;PROBLEMS- 26, 37		
		26	R	CH21: SEC: 3-4		
		27	F	PROBLEMS- 5,10,12,18,38,42		
4	JAN	31	T	Review	Exp.2:04 Electric field and electric potential	
		FEB	1	W		Exam I: (Ch 15-17,21)
		2	R	CH22: SEC: 1-6		
5	FEB	3	F	QUESTIONS-5 : PROBLEMS-5,6,8,11	Exp.2:05 Electric measurements with direct current	
		7	T	PROBLEMS-19, 28, 75		
		8	W	CH 23: SEC: 1-9		
		9	R	PROBLEMS- 1,7,15,30,44		
6	FEB	10	F	CH24: SEC: 1-6	Exp.2:06 Voltage-current characteristics	
		14	T	PROBLEMS-2,4,5,7		
		15	W	CH24: SEC: 7-11		
		16	R	PROBLEMS-14,16,43,74		
7	FEB	17	F	CH25: SEC: 1-6 First paper due for honors students	Capacitance	
		21	T	PROBLEMS-1,3,8,10,14,31,40,42		
7	FEB	22	W	CH26: SEC: 1-7	Exp.2:07 Introduction to the Oscilloscope	
		23	R	PROBLEMS-1, 4,13,18,21		
		24	F	PROBLEMS-23,37,40,50		

8	FEB	28	T	CH27: SEC:1-9	Circuits	
		29	W	QUESTIONS-1,5;PROBLEMS-2,7,24,33,37,45,5 1,57		Exp.2:08 The resistive-capacitive circuit
	MAR	1	R	Review		
		2	F	Exam II (Ch 22-26)		
9	MAR	6	T			
		7	W	No Classes		
		8	R	Spring Recess		
		9	F			
10	MAR	13	T	CH 28: SEC: 1-7	Magnetic Fields I	
		14	W	PROBLEMS-I, 3,9,13,23,28		Exp.2:10 Magnetic Field
		15	R	CH 28: SEC: 8-10	Magnetic Fields II	
		16	F	PROBLEMS-40, 4 1,46 ,52,57		
11	MAR	20	T	CH29: SEC: 1-6	Magnetic Fields due to Currents	
		21	W	PROBLEMS-4, 9, 11, 21, 24,39, 58		Exp.2:09 Electromagnetic Oscillations
		22	R	CH 30: SEC: 1-12	Induction and Inductance	
		23	F	PROBLEMS- 4, 8, 29, 34, 40, 44, 63,7 4		
12	MAR	27	T	CH 31: SEC: 1-11	EM Oscillations and AC	
		28	W	PROBLEMS-4, 5, 9, 21, 30, 43, 54, 62		Exp.2:11 The Charge to Mass Ratio of the Electron
		29	R	CH 32: SEC: 1-5	Maxwell's Equations	
		30	F	PROBLEMS-I, 3,12,14,16		
13	APR	3	T	CH 32: SEC: 6-11	Magnetism of Matter	
		4	W	PROBLEMS- 31, 36, 37,41,48		Exp.2:12 Reflection and Refraction of Light
		5	R	Review		
		6	F	EXAM III (Ch 27,32)		
14	APR	10	T	CH 33: SEC: 1-6	Electromagnetic Waves I	
		11	W	PROBLEMS-I, 4,7,10, 11,13,17 ,22		Exp.2:13 The Converging Lens
		12	R	CH 33: SEC: 7-10	Electromagnetic Waves II	
		13	F	PROBLEMS-33, 3 4,47,48,57,61,68,7 0 Second paper due for honors students		
15	APR	17	T	CH 34: SEC: 1-5,7-8	Images	
		18	W	PROBLEMS-9,10,1 1,12, 50,51,53,54,56		Exp.2:15 Make-up Lab Single Slit Diffraction and Babinet's Principle
		19	R	CH 35: SEC: 1-4	Interference	
		20	F	PROBLEMS-4,6,7,19,20		
16	APR	24	T	CH 36: SEC: 1-6	Diffraction	
		25	W	PROBLEMS-1,6,13		
		26	R	Review		
		27	F	Review		
17	MAY	2	W	Final Exam (Ch 15-17, 21-36)		