Physics for Citizens - Physics 100

Schedule & Syllabus for Spring 2015

See below for schedule, text, grading, expected student outcomes, and instructor's information

Lecture: M+W+F 1330-1420 in Physical Sciences Lecture Room 217,

Attendance required

Homework due on Monday of week after assigned, before class

Week	*Topic*	*Text section*	Concept. Exer. #s *Homework*	Problem #s *Homework*
1:	Introduction			
	Overview, fundamentals	Ch 1	Ch1-#27	none
	Fundamentals	Ch 1		
2:				
	Atoms,	Ch 2 & Ch 3	Ch2- #32, #38	none
	How things Move	Ch. 3		
3:	How things Move	Ch. 3	3- 19, 32;	3-10,
	Why things move as they do	Ch 4		

4:	Newton & why objects move	Ch4	4- 15, 25;	4-6, 16;
	Newton's Universe	Ch5	5-8, 18	5-2
5:		Ch 6	6-2, 34, 43	6-6, 16
	Work, energy, power			
6:				
	Thermodynamics	Ch 7	7-3, 16, 34	7-4
7:	**M MIDTERM 1 -- **calculator + 1 page of notes allowed ****			
	Electricity &			
	Magnetism	Ch 8	8-3, 8, 22, 26	8-2
8:	E&M	Ch 8		
	Waves, Light	Ch 9	9-14, 33, 37, 48	9-2
	Climate Change	Ch 9		

9:	Special Relativity	Ch 10	10-19, 22, 42;	10-8
	Cosmology	Ch 11		
10:	Cosmology	Ch 11	11-11,12;	
	Quantum Idea	Ch 12	12-6, 26	12-2
11:		Ch 13	13-2, 22	13-1
	Quantum Universe	Ch 13		
12:	Review			
W	**MIDTERM 2 -- ** calculator + 1 page of notes allowed ****			
	Nuclear physics	Ch 14		
13:		CH 14	14-12, 20, 36	14-11
	Nuclear Physics	Ch 14		
14:		Ch 15	15-10, 20, 28	15-2
	Fusion and Fission	Ch 15		

15:		Ch 16	16-20, 34, 36, 41	16-7
	The Energy Challenge	Ch 16		
16:		Ch 17		17-4
	Quantum Field	Ch 17		
F	Last class, review	Epilogue		

FINAL EXAM -- TBD* calculator + 1 page of notes allowed *

This Schedule is subject to Change

Text: Physics Concepts and Connections, 5th ed. by Art Hobson, Addison-Wesley 2010

Grades: 10% homework

20% each midterm

50% final exam

Physics 100 Student Learning Outcomes

Students are expected to understand the important physics concepts, the context in which they were developed, and their connections to society. This includes

1) understanding of the scientific process
2) ability to apply physics concepts
3) ability to use and understand quantitative data

The ultimate goal is for students to be able to think critically about issues involving physics as citizens in a technological society.

Teacher:

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