PHYS 1303 - sec 0011 SYLLABUS

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Introductory Mechanics

Summer 2015

Text: Fundamentals Of Physics, by Halliday, Resnick, Walker, Vol1, 10th edition

Objectives: Upon successful completion of this course, students will be able to:

1) demonstrate basic facility with the methods and approaches of scientific inquiry and problem-solving
2) explain how the concepts and findings of physics shape our world
3) develop quantitative models as related to the course subject matter
4) apply symbolic systems of representation
5) formulate structured and logical arguments

Date	Lecture	Read Chapters	Quiz due 11am	Homework due beg. class
	Introduction - Course overview			
Mo 6/1	**Measurement**	**1.1 - 1.3**	1	
	Straight Line Motion - definitions	**2.1 - 2.3**	2	
Tu 6/2	**Straight Line Motion** - constant acceleration	**2.4**	3	
	Straight Line Motion - more examples	**2.5 - 2.6**	4	**A** 1.3,1.12,2.2,2.4
We 6/3	**TEST A**			
	Vectors - components and addition	**3.1 - 3.2**	5	
Th 6/4	**Motion in Two and Three Dimensions** - definitions	**4.1 - 4.3**	6	
	Motion in Two and Three Dimensions - projectiles	**4.4**	7	**B** 2.25,2.28,2.44,2.46
Fr 6/5	**TEST B**			
	Motion in Two and Three Dimensions - more e.g.	**4.4 - 4.7**	8	**C** 3.12,3.16,4.3,4.11
Mo 6/8	**TEST C**			
	Force and Motion I - Newton's 1st & 2nd laws	**5.1**	9	
Tu 6/9	**Force and Motion I** - Force types, 3rd law	**5.2 - 5.3**	10	
	Force and Motion II - Resistive force	**6.1 - 6.2**	11	**D** 4.22,4.41,4.58,4.76
We 6/10	**TEST D**			
	Force and Motion II - Uniform Circular motion	**3.3, 6.3**	12	**E** 5.14,5.20,5.51,5.34
Th 6/11	**TEST E**			
	Kinetic Energy & Work	**7.1 - 7.4**	13	
Fr 6/12	**Variable Force, Power**	**7.5 - 7.6**	14	
	Potential Energy	**8.1**	15	**F** 6.13,6.36,6.49,6.57
Mo 6/15	**Conservation of Mechanical Energy**	**8.2 - 8.3**	16	
	Linear Momentum	**9.3 - 9.5**	18	**G** 7.11,7.20,7.39,7.46
Tu 6/16	**TEST FG**			
	Collisions!	**9.6 - 9.8**	19	**H** 8.04,8.107,8.9,8.19
We 6/17	**TEST H**			
	Rotation - Angular Variables	**10.1- 10.3**	20	
Th 6/18	**Rotation** - Rotational Inertia & Energy	**10.4 -10.5**	21	
	Rotation - Torque	**3.3,10.6-10.7,11.4**	22	**I** 9.25,9.40,9.49,9.100
Fr 6/19	**TEST I**			
	Rotation - Angular Momentum	**11.5 - 11.8**	23	**J** 10.2,10.11,
Mo 6/22	**TEST J**			10.22,10.39
	Center of Mass	**9.1 - 9.2**	17	
Tu 6/23	**Equilibrium**	**12.1 - 12.2**	24	
	Gravitation - Newton's Force Law	**13.1 - 13.4**	25	**K** 10.48,10.53,

We 6/24	**TEST K**			11.50,11.35
	Gravitation - Potential, Orbits, Dark Matter	**13.5 - 13.7**	26	**L** 9.2,9.12, 12.7,12.14
Th 6/25	**TEST L**			
	Oscillations – Simple Harmonic Motion	**15.1 - 15.3**	29	
Fr 6/26	**Oscillations** – Circular, Damped, Forced	**15.4 - 15.6**	30	
	Review			**M** 13.21,13.8,
Mo 6/29	**TEST M**			13.36,13.54
Tu 6/30	**FINAL EXAM**	*All of above*		