

PHYS 1303 - sec 002 SYLLABUS

S. Dalley

Introductory Mechanics

Fall 2014

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	Topic	Reading Chapters	Quiz	Homework Chap.Prob#
			Due dates	
Mo 8/25	Introduction - Course overview			
We 8/27	Measurement	1.1 - 1.3	1	
Fr 8/29	Straight Line Motion - definitions	2.1 - 2.3	2	
Mo 9/1	<i>Labor Day - No Class</i>			
We 9/3	Straight Line Motion - constant acceleration	2.4	3	A 1.3,1.12,2.2,2.4
Fr 9/5	Straight Line Motion - more examples	2.5 - 2.6	4	
Mo 9/8	TEST A			B 2.25,2.28,2.44,2.46
We 9/10	Vectors - components and addition	3.1 - 3.2	5	
Fr 9/12	Motion in Two and Three Dimensions - definitions	4.1 - 4.3	6	
Mo 9/15	TEST B			C 3.12,3.16,4.3,4.11
We 9/17	Motion in Two and Three Dimensions - projectiles	4.4	7	
Fr 9/19	Motion in Two and Three Dimensions - more e.g.	4.4 - 4.7	8	
Mo 9/22	TEST C			D 4.22,4.41,4.58,4.76
We 9/24	Force and Motion I - Newton's 1st & 2nd laws	5.1	9	
Fr 9/26	Force and Motion I - Force types, 3rd law	5.2 - 5.3	10	
Mo 9/29	TEST D			E 5.14,5.20,5.51,5.34
We 10/1	Force and Motion II - Resistive force	6.1 - 6.2	11	
Fr 10/3	Force and Motion II - Uniform Circular motion	3.3, 6.3	12	
Mo 10/6	TEST E			F 6.13,6.36,6.49,6.57
We 10/8	Kinetic Energy & Work	7.1 - 7.4	13	

Fr 10/10	Variable Force, Power	7.5 - 7.6	14	
Mo 10/13	<i>Fall Break - No Class</i>			
We 10/15	Potential Energy	8.1	15	G 7.11,7.20,7.39,7.46
Fr 10/17	Conservation of Mechanical Energy	8.2 - 8.3	16	
Mo 10/20	TEST FG			H 8.04,8.107,8.9,8.19
We 10/22	Linear Momentum	9.3 - 9.5	18	
Fr 10/24	Collisions!	9.6 - 9.8	19	
Mo 10/27	TEST H			I 9.25,9.40,9.49,9.74
We 10/29	Rotation - Angular Variables	10.1- 10.3	20	
Fr 10/31	Rotation - Rotational Inertia & Energy	10.4 -10.5	21	
Mo 11/3	TEST I			J 10.2,10.11,10.22,10.39
We 11/5	Rotation - Torque	3.3,10.6-10.7,11.4	22	
Fr 11/7*	Rotation - Angular Momentum	11.5 - 11.8	23	
Mo 11/10	TEST J			K 10.48,10.53,11.50,11.35
We 11/12	Center of Mass	9.1 - 9.2	17	
Fr 11/14	Equilibrium	12.1 - 12.2	24	
Mo 11/17	TEST K			L 9.2,9.12, 12.7,12.14
We 11/19	Gravitation - Newton's Force Law	13.1 - 13.4	25	
Fr 11/21	Gravitation - Potential, Orbits, Dark Matter	13.5 - 13.7	26	
Mo 11/24	TEST L			M 13.21,13.8,13.36,13.54
We 11/26	<i>Thanksgiving - No Classes</i>			
Fr 11/28				
Mo 12/1	<i>Special Relativity and Quantum Mechanics - Time Travel, Anti-Matter, Schrodinger's Cat, Dark Energy, etc.</i>			
We 12/3	Oscillations – Simple Harmonic Motion	15.1 - 15.3	29	
Fr 12/5	Oscillations – Circular, Damped, Forced	15.4 - 15.6	30	
Mo 12/8	TEST M			N 15.11,15.33,15.42,15.58
TBA	Review			
We 12/17	FINAL EXAM 11:30 am - 2:30 pm	<i>All of above</i>		

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