

Syllabus (1/31/17): Physics 1100 (Mechanics) – Spring 2017

Instructor:	Prof. Kai Shum	Phone:	718-951-5000 Ext. 1227
Lec. Room:	Ingersoll 2143 N (Lec. And Rec.)	Time:	Tu., Thur. 6:30 – 7:45 pm
Text Book:	OpenStax College (Rice University) Each chapter can be downloaded from: http://userhome.brooklyn.cuny.edu/kshum/Physics1100.htm	Office Hrs:	Tu., Thur. 3:30 - 4:30 pm
Department:	Physics	Office location:	2156f N
Lab. Assignment:	http://depthome.brooklyn.cuny.edu/physics/phylabs_new.html	Instructor's e-mail:	kshum@brooklyn.cuny.edu

Planned work:

Date	Topics	Lab	Problems & Exercises
1/31, 2/2	Ch2, Kinematics (1D) [sec. 2.1 to 2.7]	Intro	Sec. 2.1-7 (even or odd)
2/7, 9	Ch3, Kinematics (2D) [sec. 3.1 to 3.5]	g	Sec. 3.1-5 (even or odd)
2/14, 16	Ch4, Dynamics - Newton's laws of motion [sec. 4.1 to 4.6]	v-2D motion	Sec. 4.1-6 (even or odd)
2/21, 23	Ch5, Newton's 2 nd law (friction, drag, and elasticity) [sec. 5.1 to 5.3]	Co-planar forces	Sec. 5.1-3 (even or odd)
2/28, 3/2	Review and Exam-1 on 3/2 (16%)	Newton's Laws	
3/7, 9	Ch6, Uniform circular motion and gravitation [sec. 6.1 to 6.3]	Centripetal force	sec.6.1 (1 to 8); sec.6.2 (10 to 20); sec. 6.3 (23 to 29)
3/14, 16	Ch7, Energetics [sec. 7.1 to 7.7] Ch13, Temperature/thermal expansion [sec. 13.1-2] Ch14, Heat-capacity/heat-transfer [sec. 14.1-2]	M/T energy conversion	sec.7.1 (1 to 8); sec.7.2 (9 to 15); sec. 7.3 (18 to 20); sec.7.4 (22, 23); sec.7.6 (27) sec.13.1-2; sec.14.1-2
3/21, 23	Ch8, Impulse, linear momentum and collisions (1D) [sec. 8.1 to 8.5]	Cons. Force system	sec.8.1(1 to 6); sec.8.2(7,8,9,15); sec.8.3(23 to 27); sec.8.4(28 to 30); sec.8.5 (31 to 38)
3/28, 30	Ch9, Statics and torque [sec. 9.1 to 9.5] Review and Exam-2 on 3/30 (15%)	1D collision	sec.9.2 (1 to 5); sec.9.5(19 to 24)
4/4, 6	Ch10, Rotational motion – kinematics and dynamics [sec. 10.1-3]	Static equilibrium	sec.10.1(1-3); sec.10.2 (5-9) sec.10.3 (10-18)
4/10-18	Spring recess		
4/25, 27	Ch10, Rota. motion – energetics [sec.10.4] Ch16, Oscillatory motion (spring and point-mass) [sec.16.1-6]	Conservation angular mo.	sec.10.4 (21-30); sec.16.1-6
5/2, 4	Ch11&12 Fluid	Archimedes principle	
5/9, 11	Ch16, Oscillatory motion – pendulum [sec.16.1-6] Review and Exam-2 on 5/11 (15%)	Pendulum	
5/16, 18	Waves [sec.16.9-11]	Waves on string	sec.16.9-11
5/19	Review (final exam between 5/22-26)		
	Grades: Lec.-exams 46%, Lab 14%, and final 40%		

Note: *4/20(Thursday)-Monday-scheduled. Please check other important dates on the physics department website.