

PHYS 709: Classical Mechanics

Lecture Schedule - Fall 2015

Dr. Gladden

(subject to change)

Date	Subject	Reading	Homework
8/25/15	Intro. and Newton's Laws, Systems of Particles	Chap. 1.1-3	
8/27/15	Systems of Particles, Central Forces	Chap. 1.2-3	HW#0 - Practice
9/1/15	Central Forces, Two body motion	Chap. 1.3	
9/3/15	Two body motion, Scattering	Chap. 1.4-5	1.2, 1.4, 1.6
9/8/15	Changing mass, Accelerated Reference Frames	Review!	
9/10/15	Accelerated Reference Frames	Chap. 2.6-10	1.10 1.13, 1.16
9/15/15	Motion on Earth's surface, Foucault pendulum	Chap. 2.11-12	
9/17/15	D'Alembert's Principle, Lagrange Eqns.	Chap. 3.13-15	
9/22/15	Calculus of Variations	Chap. 3.16-17	Chap.2 HW
9/24/15	Hamilton's Principle, Forces of Constraint	Chap. 3.18-19	
9/29/15	Forces of Constraint, Generalized Momenta	Chap. 3.19-20	
10/1/15	Generalized Momenta	Chap. 3.19-20	Chap. 3 HW
10/6/15	Small Oscillations	Chap. 4.21-22	<i>Travel</i>
10/8/15	Normal Modes	--	Test 1 (Chap. 1-3)
10/13/15	Normal Modes I	Chap. 4.22	Chap 4. HW
10/15/15	Normal Modes II, Examples	Chap. 4.22	
10/20/15	More Examples, Graham Schmidt	Review!	Chap. 4 HW
10/22/15	Inertia Tensor, Tensor Review	Chap. 5.26	
10/27/15	Rigid body theory, Euler, Eqns.	Chap. 5.26-28	
10/29/15	Kater's Pendulum, Assymmetric Top	Chap. 5.28	Chap. 5 HW
11/3/15	Euler Angles, Heavy Symmetric Top	Chap. 5.31	<i>Travel</i>
11/5/15	Heavy Symmetric Top, Hamilton's Eqns.	Chap. 5.31	<i>Travel/Chap.5HW</i>
11/10/15	Hamilton's Eqns., Particles in an EM field	Chap. 6.32-34	
11/12/15	Hamilton Jacobi Theory	Chap. 6.35	Chap. 6 HW
11/17/15	Action angle variables	Chap. 6.36-37	<i>Travel</i>
11/19/15	Poisson Brackets	Chap. 6.36-37	Test 2 (Chap.4-5)
11/24/15	(* Fall / Thanksgiving Break *)		
11/26/15	(* Fall / Thanksgiving Break *)		
12/1/15	Test Discussion, Transition to Quantum Mech.	6.37	Chap. 6. HW
12/3/15	Wrap up and Exam Discussion		
12/1/14	Thurs. 8:00 AM - 11:00 AM, Final Exam (see also the UM Final Exam Schedule)		