

# Physics I Honors (Fall 2008)

## Lecture and Discussion Schedule

Week	Date	Day	Topics	Reading	Homework <i>Due</i>
1	25 Aug	Mon	Dimensional analysis; Kinematics and Dynamics in One Dimension	Notes	_____
	28 Aug	Thu	Math: Vectors; Approximation Methods	Chap.1	1.2, 1.12, 1.13
2	1 Sep	Mon	<i>No Class: Labor Day</i>		_____
	4 Sep	Thu	Newton's Laws; Everyday Forces; The Pendulum	Chap.2	1.1, 1.4, 1.8, 1.17
3	8 Sep	Mon	Momentum; Center of Mass	Chap.3	_____
	11 Sep	Thu	Integrating the Equation of Motion: The Work Energy Theorem	4.1-4.5	2.5, 3.1, 3.4, 3.15
4	15 Sep	Mon	Energy, Force, and Power	4.6-4.13	_____
	18 Sep	Thu	Conservation of Momentum; Collisions	4.14	4.3, 4.4, 4.13, 4.15
5	22 Sep	Mon	Math: Calculus in Three Dimensions w/Applications	Chap.5	4.25
	25 Sep	Thu	<b>Midterm Exam #1</b> (Through 18 Sep)		_____
6	29 Sep	Mon	Fixed Axis Rotation; Angular Momentum	6.1-6.5	_____
	2 Oct	Thu	Application: The Original Wham-O Super Ball	6.6-6.8; Notes	5.3, 6.8, 6.11
7	6 Oct	Mon	Vector Angular Momentum; Gyroscopes	7.1-7.4	_____
	9 Oct	Thu	Conservation of Angular Momentum; Rigid Body Rotations	7.5-7.7	6.21, 7.3
8	14 Oct	<i>Tue</i>	Non-inertial Reference Frames; Uniform Acceleration	8.1-8.3; 11.4	_____
	16 Oct	Thu	Equivalence Principle; Rotating Coordinate Systems	8.4-8.5	7.6, 8.1
9	20 Oct	Mon	Central Force Motion; Dark Matter in Galaxies	9.1-9.5; Notes	_____
	23 Oct	Thu	Planetary Motion; Kepler's Laws	9.6-9.7; Notes	8.7, 9.1, 9.4
10	27 Oct	Mon	The Simple Harmonic Oscillator; Damped Oscillations	10.1-10.2	9.9
	30 Oct	Thu	<b>Midterm Exam #2</b> (Through 23 Oct)		_____
11	3 Nov	Mon	Forced Harmonic Oscillator; Resonance	10.3-10.4	_____
	6 Nov	Thu	Introduction to Wave Motion	Notes	10.2, 10.5, 10.9
12	10 Nov	Mon	Coupled Harmonic Oscillations; Eigenvalues	Notes	_____
	13 Nov	Thu	Statistical Mechanics: The Ideal Gas Equation of State	Ex.3.18; Notes	10.10, 10.11
13	17 Nov	Mon	Heat Energy and Cyclic Processes; Heat Engines	Notes	_____
	20 Nov	Thu	Entropy; The Second Law of Thermodynamics	Notes	Handout
14	24 Nov	Mon	Basic Stellar Structure; White Dwarf Stars	Notes	Handout
	27 Nov	Thu	<i>No Class: Thanksgiving</i>		_____
15	1 Dec	Mon	Introduction to Fluid Dynamics	Notes	Handout
	4 Dec	Thu	<b>Midterm Exam #3</b> (Through 24 Nov)		_____