

Principles of Physics I Syllabus*

Week	Topics	Reading	Lab	Notes
1 (27-31 Aug.)	Quantifying the world ... units, orders of magnitude, and math basics	1 (pp. 1-15) 2 (pp. 16-21)	No Lab	
2 (3-7 Sept.)	Using graphs and equations to describe motion	2 (pp. 21-32) 3 (pp. 33-40)	Excel Workshop & Meas. Uncertainty	No Class Mon. Sept. 3
3 (10-14 Sept.)	More on motion (kinematics): position, velocity, acceleration	3 (pp. 40-49)	1D Motion	
4 (17-21 Sept.)	Forces change motion: Newton's Laws and vectors	4 (pp. 57-66)	Force Measurement	Exam I Fri. Sept. 21
5 (24-28 Sept.)	Force diagrams, friction, coupled systems	4 (pp. 66-71)	Conservation of Energy (Lab Paper due Oct. 8)	
(Ohio Section of the American Physical Society Fall Meeting: 28-29 Sept.)				
6 (1-5 Oct.)	Momentum and its conservation	4 (pp. 71-77)	Open Lab	Fall Wknd: No Class Fri. Oct. 5
7 (8-12 Oct.)	Angular momentum and rotational motion	4 (pp. 77-82)	Cons. of Momentum	Lab Paper due Mon Oct. 8
8 (15-19 Oct.)	Energy and its conservation: Kinetic and potential energies	6 (pp. 101-118)	Circular Motion	
9 (22-26 Oct.)	Work and Energy	6 (pp. 118-126)	Oscillatory Motion	Exam II Fri. Oct. 26
10 (29 Oct.-2 Nov.)	Thermodynamics and the ideal gas model	7 (pp. 135-138, 142-154)	Temperature of Liquid Nitrogen and Absolute Zero	
11 (5-9 Nov.)	Fluids: Archimedes and Bernoulli	7 (pp. 138-142)	Heat of Vaporization of Liquid Nitrogen	
12 (12-16 Nov.)	Entropy & 2nd law of thermo Laws and their Limits: Models of Reality	14 (pp. 328-331) 5 (pp. 90-102)	No Lab	
Comprehensive Final Exam: Tues. Nov. 20, 8-10 AM				

*Note: This schedule is subject to change through the term, although the exam dates are firm.