

Fall 2009 PHYSICS FOR TODAY SCSU (Phy111) T+R 11:00-12:15

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Text: Hewitt; **Conceptual Physics 10th edition; Also my solution manual on my website**

This course assumes no previous knowledge of physics. The mathematics will be arithmetic and simple algebra. Regular class attendance is expected and participation is encouraged. **Course objectives** include the ability to explain the topics listed below and working knowledge of the rules listed on the 'things to know by heart' pages of my workbook. Bring your text, notebook and an open mind to class and let's take a look at the world that we live in.

Tentative Schedule

Date	Topic	Chapter	Mandatory H.W.
Sept. 1	Introduction; linear motion displacement, speed, velocity, and acceleration	3	p.54 RQ. 2,3,5-13,18-20,23-26 p.55-57 Ex.1-6,9-11,13,15-18,21,25-30,36 32,33,35,37 p.57 Prob. 2,5,6, Project#1 2pts EC
3	Newton's 1 st Law of Motion inertia,mass	2	p. 36 RQ 9-11,14,15,17,20 Ex. 1,20,21,24,26,37,30,40,46,47,49 Project 2 pts EC
8 10	Nonlinear motion,Vector addit. Projectile motion, Satellites	10	p. 204 RQ 1,3,5-7,8,9,11,13 p.205-208 EX. 5,10,13,14,19,27,36,51 p. 208 Prob. 2
15	Newton's 2 nd Law of Motion Terminal Velocity	4	p. 69 RQ 3-6,10-12,14,16,19-25,27,30-33 1 step calc. 1,6 p. 71 Ex.1,7,9,13,14,17,21,34,37-39 p. 73 Prob. 2,4
17 22	Newton's Third law Weight, tee shirt contest 10 Pt. question	5 5	p.87 RQ 4,5,10,11,13,17 p.88 EX. 13,19,21,24,29,40 p. 90 Prob. 2
24	Rotation-centripetal accel. torque, angular momentum Moment of inertia	8 8	p. 154 RQ 1,2,6,7,13,15,23-26,29,31 Project#1 2pts EC p. 156 EX. 18,38,41
29	Gravity-an inverse square law review and catch-up	9	p. 179 RQ 4,6,7,9 p. 181 EX. 3,10,14,25,28,34 p. 183 Prob. 1,2
Oct. 1	EXAM 1		
6	Linear Momentum, impulse	6	p. 105 RQ. 1-4,9,16,
8	Linear Momentum, impulse	6	p. 106 EX. 1-3,5,13,16,18,27,46,48,49 p. 109 Prob. 6,8
13	Work, Power and Energy	7	p. 126 RQ. 2-4,7,8,10,11,17,25,26 p. 127 1-step calc. 1,4,7
15	Work, Power and Energy	7	p. 127-129 Ex. 11,19,20,28,29,32,33,45,61 p. 130 Prob. 4,7; p200 Ex.59
20+22	Fluids, Pressure and Buoyancy	13	p.263 RQ 1-5,7,9,16,21 p.264 1-step calc. 2 Pts EC 1+2 p.264 Ex. 4-6,8,13,14,23,32,35,41
27	Gases, Air Pressure, Bernoulli's Principle Mid-Term grades	14	p. 283 RQ 7-11,13,16,20,22 p. 286 Ex. 9,15,26,55 p. 288 Prob. 1,2
29	Temperature and Heat	15	p. 301 RQ 2,5,7-10,12,15,17 p. 303 Ex.14,25,27,28 p. 305 Prob. 2

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Nov.			
3	Heat transfer, change of state 10 pt. question	16 17 p. 341	p. 321 RQ 1,7,19 p. 338 RQ 1,2,4,5,7,8,14,15,17,19,29,30 Prob. 1
5	Thermodynamics	18	p.357 RQ 6,9-13,15,16,19,27 p.358 Ex. 7,8,38
10	EXAM 2		
12	Electrostatics-Coulomb's law, lightning, a shocker	22	p.431 RQ 1-3,6,11 p.432-433 Ex. 5,9,15,24,25,29 p.435 Prob. 1,7
17	Introduce Ohm's law	23	p. 452 RQ 4,7,11-14,17-19,27,29,30,33-37
19	Electric current-Ohm's law -how voltage and resistance effect current; 10 pt. question	23	p. 454 Ex. 5,8,18,23,24,27,28,30,31; p.457 Prob. 2,4
	Magnetism	24	p. 474 RQ 17,27 p. 475 Ex. 8,9,20,24,38
24	Wave motion; sound; Doppler effect and radar guns	19	p. 376 RQ 3,7,8,11-16,20,22 p.377 Ex.19,25,35,39 p.379 Prob.3
25-29	Thanksgiving Recess		
Dec. 1	Electromagnetic Radiation-reflection,	26	p.511 RQ 7,9,11 p. 512 Ex. 19,21,28,29,48
	Refraction, diffraction, rainbows,	27	p. 526 RQ 1,2-5,20,23,25
3	Blue sky and soap bubbles	28	p. 552 RQ 1,5,6,13,16,19,22,24
8	Atomic Nucleus and	11	p. 226 RQ 1,2,11,18,20 p.226 Ex. 18,19,23,24,26,28,29,36
10	Radioactivity	33	p.657 RQ 5-7,10,12,16,21-25,24,34 p. 658Ex. 2,4,6-10,12,23,28,29,32,33,45,49 p. 660 Prob.1,2
15	Tues Exam 3	10:15-12:15	

Four Keys to happiness and success in physics: Most of you "see" the world in a different way than a physicist does. At times you may feel frustrated. Hang in there. We can do it and it will be worth it. For many of you, this physics course will be your favorite.

Please pledge to yourself that you will try to do the following:

- (1) Do the reading assignment before class and then attempt to answer the questions after the lecture on that material.
- (2) Compare your answers with mine and use the suggested homework questions as a self-check. If you have trouble with them, ask in class or see me for help. The answers to most of the homework is on my website.
- (3) Don't miss any classes-If you need to miss a class, email me. You can review the lectures on my website.
- (4) Please- don't be afraid to ask questions, let's deal with your misconceptions in class instead of on the test. **Exam**

Rules: You may not use a calculator or notes of any kind during the exam. If you miss or know that you are going to miss an exam, contact me immediately. Anyone caught cheating will receive an 'F' for the course.

Course grading: Your final grade for this course will be based on the three exams. The third exam contains some material from the first two exams that serve as extra credit (20 pts.). Extra credit projects are possible, but don't wait until the last week. See me about your options. Good Luck.

Grading:

Exam 1	100 pts	A's= 270-340	D's=180-209
Exam 2	100 pts	B's= 240-269	F= don't let it happen!
Exam 3	120 pts	C's= 210-239	
+Extra credit__20 pts maximum__(see me for details)			
Perfect = 340 pts			