

Spring 2008 PHYSICS FOR TODAY SCSU (Phy111) Course# 40684 T+R 11:00-12:15

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Office Hours 10:30-11:00 T+R Jennings **119** Website: <http://home.southernct.edu/~tremblayr1/>

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	suggested H.W.
Jan. 22	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
24	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
29	Nonlinear motion,Vector addit.	10	p. 204 RQ 1,3,5-7,8,9,11,13
Feb. 5	Projectile motion, Satellites		p.205-208 EX. 5,10,13,14,19,27,36,51 p. 208 Prob. 2
7	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
12	Newton's Third law	5	p.87 RQ 4,5,10,11,13,17
14	Weight, tee shirt contest	5	p.88 EX. 13,19,21,24,29,40 p. 90 Prob. 2
19	Rotation-centripetal accel. torque,	8	p. 154 RQ 1,2,6,7,13,15,23-26,29,31 Project#1 2pts EC
21	Moment of inertia	8	p. 156 EX. 18,38,41
26	angular momentum, Gravity-an inverse square law	9	p. 179 RQ 4,6,7,9 p. 181 EX. 3,10,14,25,28,34 p. 183 Prob. 1,2
28	review and catch-up		
March 4	EXAM 1		
6	Linear Momentum, impulse	6	p. 105 RQ. 1-4,9,16,
11	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
14	Mid-Term grades due		p. 127 1-step calc. 1,4,7
15	Spring break begins 6:00 PM		
25	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
24	Last day to withdraw		
27	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
April 1	Gases, Bernoulli's Principle	14	p. 283 RQ 7-11,13,16,20,22 p. 286 Ex. 9,15,26,55 p. 288 Prob. 1,2

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Date	Topic	Chapter	H.W.
April 3	Temperature and Heat Specific heat capacity	15	p. 301 RQ 2,5,7-10,12,15,17 p. 303 Ex.14,25,27,28 p. 305 Prob. 2
8	Heat transfer, change of state Heat of fusion, heat of vaporization	16 17	p. 321 RQ 1,7,19 p. 338 RQ 1,2,4,5,7,8,14,15,17,19,29,30 p. 341 Prob. 1
10	Thermodynamics Review and catch-up	18	p.357 RQ 6,9-13,15,16,19,27 p.358 Ex. 7,8,38
15	EXAM 2		
17	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
22	Introduce Ohm's law	23	p. 452 RQ 4,7,11-14,17-19,27,29,30,33-37
24	Electric current-Ohm's law -how voltage and resistance effect current; Magnetism	23 24	p. 454 Ex. 5,8,18,23,24,27,28,30,31; p.457 Prob. 2,4 p. 474 RQ 17,27 p. 475 Ex. 8,9,20,24,38
29	Wave motion; sound; Doppler effect and radar guns	19 19	p. 376 RQ 3,7,8,11-16,20,22 p.377 Ex.19,25,35,39 p.379 Prob.3
May 1	Electromagnetic Radiation-reflection, Refraction, diffraction, rainbows,	26 27	p.511 RQ 7,9,11 p. 512 Ex. 19,21,28,29,48 p. 526 RQ 1,2-5,20,23,25
6	Blue sky and soap bubbles	28	p. 552 RQ 1,5,6,13,16,19,22,24
8	Atomic Nucleus and Radioactivity	11 33	p. 226 RQ 1,2,11,18,20 p.226 Ex. 18,19,23,24,26,28,29,36 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

13 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.

I suggest 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. Memorize the 'Things to know by Heart' as we cover them.
- (3) Don't miss any classes- But if you do, go to my website at: <http://home.southernct.edu/~tremblayr1/> and view the lecture there.
- (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 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		