

Physics 4C Tentative Schedule Fall 2009

All homework is due the following class meeting

Date	Lecture Topic	Reading Assignment	Homework Assignment
8/17 Mon	Syllabus 16.1, 16.2	Pg 483-484 16.1-16.4	Pg 507 # 1, 2, 5, 7, 10
8/18 Tues	Lab: Thermal Physics Lab #1 Heat & temp concept eval		
8/19 Wed	States of matter, Temperature, Phase Changes	16.5	Pg 507 # 11, 13, 14, 15, 18, 35
8/21 Fri	Ideal Gas	16.6	PG 507 #19, 20, 23, 25, 38, 43
8/24 Mon	Ideal Gas Processes	17.1-17.2	Pg 508 #27, 28, 30, 32, 33
8/25 Tues	Thermal Physics Lab #2 QUIZ #1		
8/26 Wed	First Law & Work	17.3-17.4	Pg 509 # 50, 56, 59, Pg 541 # 1, 3, 4
8/28 Fri	Heat & First Law	17.5-17.6	Pg 541 #7, 8, 9, 10, 12, 13
8/31 Mon	Thermal Properties of Matter	17.7	Pg 542 # 15, 16, 21, 22, 35, 42
9/1 Tues	Thermal Physics Lab #3		
9/2 Wed	Specific Heat of Gases	18.1-18.2	Pg 542 #27, 28, 29, 48, 51, 63
9/4 Fri	Mean Free Path Pressure in a gas	18.3-18.4	Pg 545 #66 Pg 569 # 2, 4, 7, 9, 11
9/7 Mon	Labor Day Holiday		
9/8 Tues	Lab: Atoms in Motion QUIZ #2		
9/9 Wed	Temp & Specific Heat	18.5-18.6	Pg 569 # 13, 18, 20, 25, 27, 30
9/11 Fri	Thermal Interactions & Second Law		Pg 570 #33, 50
9/14 Mon	Make-up/Review Day Heat & temp concept eval		
9/15 Tues	TEST #1 Thermal Physics		
9/16 Wed	Review mathematics of traveling Waves	20.1-20.6	Pg 640 # 10, 12, 14, 42, 54
9/18 Fri	Sound, Light, Intensity, Doppler effect	21.1-21.4	Pg 641 # 25, 28, 32, 33
9/21 Mon	Standing Waves	21.5-21.6	Pg 677 # 7, 9, 10, 13
9/22 Tues	Lab: Optics #1 Optics concept eval		
9/23 Wed	Interference in one dimension	21.7	Pg 677 #22, 24, 47, 60
9/25 Fri	Tutorials 2-D Interference	22.1-22.2	Pg 677 #26, 27, 68

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9/28 Mon	Tutorial continued Double slit interference	22.3	Tutorials Handout Pg 709 # 1, 2, 3, 6, 34
9/29 Tues	Lab: Optics #2 QUIZ #3		
9/30 Wed	Diffraction Grating	22.4	Pg 709 # 8, 9, 10, 12, 45 Handout
10/2 Fri	Single slit Diffraction	24.1	Pg 709 # 14, 15, 17, 29, 51 Handout
10/5 Mon	Spectroscopy Video: The Atom	24.2-24.3	Pg 775 # 1, 2, 3, 19
10/6 Tues	Lab: Optics #3 QUIZ #4		
10/7 Wed	Photons	24.4	Pg 775 # 4, 5, 7, 8, 10, 21, 22
10/9 Fri	PLANNING DAY No Class		
10/12 Mon	Matter Waves Optics concept eval	24.5	Pg 775 # 12, 13, 15, 29, 30
10/13 Tues	TEST #2		
10/14 Wed	Quantization of Energy	Pg1149-1150 36.1-36.2	Pg 775 # 16, 18, 34, 35
10/16 Fri	Galilean Relativity	36.3-36.4	Pg 1190 # 1, 2, 3
10/19 Mon	Einstein's Relativity Events	36.5-36.6	Pg 1190 # 6, 7, 8,
10/20 Tues	Lab: Bragg Diffraction Measurement Uncertainty concept eval		
10/21 Wed	Simultaneity, Time Dialation	36.7	Pg 1190 # 9, 11, 13, 15, 17, 19
10/23 Fri	Length Contraction	36.8	Pg 1191 # 22, 23, 24, 26, 47
10/26 Mon	Lorentz Transformation	36.9	Pg 1191 # 21, 29, 31, 48, 57
10/27 Tues	Lab: Matter Waves QUIZ #5		
10/28 Wed	Momentum	36.10	Pg 1191 # 34, 37, 56
10/30 Fri	Energy	37.1-37.5	Pg 1191 # 38, 41, 66, 71, 73
11/2 Mon	Video: The Atom VC33-54	37.6-37.9	Pg 1216 # 5 Workbook
11/3 Tues	Lab: Oil Drop Day #1 Video: VC33-17		
11/4 Wed	Rutherford Nucleus	38.1	Pg 1216 # 9, 11, 15, 17, 32
11/6 Fri	Photoelectric Effect	38.2-38.3	Workbook Ch 38 # 1-20
11/9 Monday	Photoelectric Effect: Einstein Explanation	38.4	Pg 1248 # 1, 2, 3, 7, 12, 44, 45

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Date	Lecture Topic	Reading Assignment	Homework Assignment
11/12 Tues	Lab: Oil Drop Day 2 QUIZ #6		
11/11 Wed	Veteran's Day Holiday		
11/13 Fri	Video: Particles & Waves VC33-55	38.5	Pg 1249 # 17, 18, 19, 49
11/16 Mon	Bohr Atom	38.6-38.7	Derive Bohr Atom Spectrum from scratch; Ph 1249 # 24, 25, 26
11/17 Tues	Lab: H/e QUIZ #7		
11/18 Wed	Bohr Spectrum	39.1	Pg 1249 # 29, 55, 61, 62
11/20 Fri	Particles & Double Slit Experiment	39.2-39.4	Pg 1272 # 1, 2, 3, 5, 6, 7
11/23 Mon	Wave Function	39.5-39.6	Pg 1272 # 8, 9, 10, 11, 12, 14, 17
11/24 Tues	Lab: Franck-Hertz Experiment		
11/25 Wed	Wave Packet & Uncertainty Principle	40.1	Pg 1273 # 19, 21, 23, 25, 43
11/27 Fri	Thanksgiving Holiday		
11/30 Mon	Schrodinger Equation	40.2-40.3	
12/1 Tues	Lab: Chaos		
12/2 Wed	Solving Schrodinger Eqn, Particle in a box	40.4-40.5	Practice derivation of solution to the rigid box
12/4 Fri	Particle in Box Interpreting the Solution	40.6	Pg 1313 # 4, 25, 26
12/7 Mon	Finite Potential Well	40.7-40.9	Pg 1313 # 5, 6, 7, 9
12/8 Tues	Finish Chaos lab if needed		
12/9 Wed	Wave function shapes; Other cases	40.10	Pg 1313 # 11, 13, 14, 16, 17
12/11 Fri	Tunneling		
12/14 Mon	Final 1:00		