PHY 3101 Schedule Fall 2005 (Subject to Change)				
Week	**Material**	**Reading Assignment**	**Homework Assignment**	**Announcements**
#1: Aug. 22	Course Introduction Syllabus, Policies **Chapter 1: Relativity I** Experimental Basis, Einstein Postulates	Chapter 1.1 – 1.5		
#2: Aug. 29	**Chapter 1: Relativity I** Lorentz Transformations, Time Dilation and Length Contraction Doppler Effect **Chapter 2: Relativity II** Relativistic Momentum	Chapter 1.6, 2.1-2.4	Problem Set 1 Due, Sept. 2	
#3: Sept. 5	**Chapter 2: Relativity II** Energy, Mass-Energy Conservation, (Invariant Mass) **Chapter 3: Quanta** Charge quantization, blackbody radiation	Chapter 3.1-3.4	Problem Set 2 Due, Sept. 9	Labor Day; No class: Sept. 5;
#4: Sept. 12	**Chapter 3: Quanta** photoelectric effect, X-rays and Compton effect **Chapter 4: Nuclear Atom** Atomic Spectra, Rutherford model	Chapter 4.1 – 4.6	Problem Set 3 Due, Sept. 16	
#5: Sept. 19	**Chapter 4: Nuclear Atom** Bohr model, X-ray spectra, (Franck-Hertz experiment) **Chapter 5: Particles as Waves** de Broglie waves and measurements	Chapter 5.1-5.5	Problem Set 4 Due, Sept. 23	
#6: Sept. 26	**Chapter 5: Particles as Waves** wave packets, wave functions, probability, uncertainty principle and consequences, wave-particle duality	Chapter 5.6, 5.7	Problem Set 5 Due, Sept. 30	
#7: Oct. 3	**Chapter 6: Schrodinger Equation** 1D infinite square well, expectation values and operators	Chapter 6.1-6.6		**Midterm Exam 1: Wednesday, Oct. 5 Chapters 1-4** Homecoming: No class Oct. 7
#8: Oct. 10	**Chapter 6: Schrodinger Equation** simple harmonic oscillator, reflection and transmission of waves **Chapter 7: Atomic Physics** 3D Schrodinger equation	Chapter 7.1-7.3	Problem Set 6 Due, Oct. 14	
#9: Oct. 17	quantization of angular momentum and energy, hydrogen wave functions, electron spin	Chapter 7.4-7.5	Problem Set 7 Due, Oct. 21	
#10: Oct. 24	**Chapter 7: Atomic Physics** total angular momentum, spin-orbit coupling, 2 particle SE	Chapter 7.6	Problem Set 8 Due Oct. 28	

#11: Oct. 31	**Chapter 8: Statistical Physics** Classical statistics	Chapter 8.1-8.3	Problem Set 9 Due, Nov. 4	
#12: Nov. 7	**Chapter 8: Statistical Physics** quantum statistics, (BEC)	To Be Announced		**Midterm Exam 2: Wednesday, Nov. 9 Chapters 5-7**
				Veterans Day, Friday, Nov. 11
#13: Nov. 14	**Class Selected Topics I**	TBA	Problem Set 10 Due Nov. 18	
#14: Nov. 21	**Class Selected Topics II**	TBA	Problem Set 11 Due Nov. 23	November 21, last day to drop
				Thanksgiving, no class, Friday Nov. 25
#15: Nov. 28	**Class Selected Topics III**	TBA	Problem Set 12 Due Dec. 2	
#16: Dec. 5	**Class Selected Topics IV**		Problem Set 13 Due Dec. 9	
December 16	**FINAL EXAM (Venue TBA)**			