

PC 251 Intro Physics I

Block 3, 2018

Omit reading all starred (*) sections in textbook unless told otherwise.

Problems labelled SX.X are supplementary problems found on Canvas.

Day	Reading	Problems	Graded Work, Special Events, and Lab
1 Monday	Review EM Waves Giancoli Chp 22: 1- 5 (see Canvas)	none	
2 Tuesday	Chp 1: Space and Time of Relativity omit Sect 1.13 - 1.14	Chp 1: 8, 10, S1.1, 22, 26, 32, 38, 42, 43	Computer Workshop 1 - 3 PM or 3 - 5 PM Olin 262A bring laptop if you have one
3 Wednesday	Chp 2.4 - 2.6, 2.8: Relativistic Mechanics Chp 3.1 - 3.6, 3.12: Atoms Rutherford Scatting	Chp 2: 21, 29, 41 Chp 3: 6, 11, 15, 19a, 20d, 24a, 47 S3.1, S3.2, S3.3, S3.4	speed of light lab
4 Thursday	Quantization of Light Chp 4.1 - 4.3: Blackbody Radiation Photoelectric Effect	Chp 4: 4, 9, 12, 16, 17, S4.1, S4.2	class runs 9:30 - 12:30 speed of light lab
5 Friday	catch-up day	none	9 AM: Day 2 - 4 HW due 1.5 hour quiz 5 PM: week 1 computer problems due speed of light lab

	Day	Reading	Problems	Graded Work, Special Events, and Lab
6	Monday	Quantization of Light Chp 4.4 - 4.7: X-rays Compton Scattering Chp 5: 5.1 - 5.5 Atomic Energy Levels	Chp 4: 24, 25, 26, 29, S4.3	electron diffraction or photoelectric effect lab
7	Tuesday	Chp 5: 5.6 - 5.10 Bohr Atom	Chp 5: 3, 12, S5.1, 14, 18, 20, 22, 26, S5.2	electron diffraction or photoelectric effect lab
8	Wednesday	Proton Radius Problem on Canvas Chp 6: Matter Waves Wave function, Fourier analysis Uncertainty Principle	Chp 6: 1, 9, 12, 15, S6.1, 22, S6.2 26, 31, 32, S6.3, 43, 48	9 - 9:30 Breakfast in class 12 - 1 PM Seminar by Evie Downie on the proton radius 1 - 2 PM class
9	Thursday	Continue Chp 6	none	5 PM: Week 2 computer probs due Day 6 - 8 homework due electron diffraction or photoelectric effect lab
10	Friday	midterm	none	1 - 4 PM: Midterm

	Day	Reading	Problems	Graded Work, Special Events, and Lab
11	Monday	Chp 7: 1D Schrödinger Equation Particle in a box	Chp 7: 9, S7.1, 10, 12, 14, 17, 20 S7.2, 26, 30, 34, S7.3	Franck-Hertz expt or optical spect. lab
12	Tuesday	Chp 7: 1D Schrödinger Equation Particle in a non-rigid box Free particle, SHO, Tunneling inc secs 7. 9 , 7.10 and 7.11 pgs 473 - 476: STM	Chp 7: 40, 42, 44, 49, 50, 53, 55, 57	Franck-Hertz expt or optical spect. lab
13	Wednesday	Chp 8: 3D Schrödinger Equation 2D square box, hydrogen atom spherical harmonics	Chp 8: 9, 10, 20, 25, 29, 33ab, S8.1, 36, S8.2, 38a,	Franck-Hertz expt or optical spect. lab
14	Thursday	Chp 8: 3D Schrödinger Equation hydrogen atom radial function	Chp 8: 40, S8.3, 42, S8.4, 49, 52	Franck-Hertz expt or optical spect. lab
				Computer tutorial 3 PM
15	Friday	none	none	5:00 PM Day 11 - 14 homework due

	Day	Reading	Problems	Graded Work, Special Events, and Lab
16	Monday	Sects 9.1 - 9.2: Spin Sects 10.1 - 10.4, 10.6: Multielectron Atoms	Chp 9: 1, 3, S9.1 Chp 10: 6, 8, 16, S10.1	5:00 PM Week 3 computer probs due Lab report due
17	Tuesday	review and study day	none	noon Day 16 homework due
18	Wednesday	none	none	Final exam 8 AM - 12 PM