

# Winter 2012 Physics 123 Schedule (majors/minors section)

Reading: In the schedule below "PpP" refers to the supplemental textbook, *Physics Phor Phanatics* by Dr. Durfee

Labs: The labs are set up and taken down on Saturday mornings. You won't be able to do finish a lab on that day if it is due on that Saturday.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
January	02	03	04 Day 1: Intro, pressure Reading: syllabus, 14.1–14.2	05	06 Day 2: Archimedes' principle Reading: 14.3–14.4 (HW 1)	07 Lab 1 begins (pressure)
	09 Day 3: Fluid motion Reading: 14.5–14.7 (HW 2)	10	11 Day 4: Thermal expansion, Ideal gas law Reading: 19.1–19.5 (HW 3)	12	13 Day 5: Kinetic theory Reading: 21.1, 21.5 (and 21.6 if you have it) (HW 4)	14 Lab 1 due
	16	17	18 Day 6: Calorimetry Reading: 20.1–20.3 (HW 5)	19	20 Day 7: Heat transfer Reading: 20.7 (HW 6)	21 Lab 2 begins (specific heat)
	23 Day 8: First Law of thermodynamics Reading: 20.4–20.6 (HW 7)	24	25 Day 9: Molar specific heats Reading: 21.2–21.4 (HW 8)	26	27 Day 10: Heat engines Reading: 22.1, 22.5 (HW 9)	28 Lab 2 due
February	30 Day 11: Refrigerators and Carnot Reading: 22.2–22.4 (HW 10)	31	01 Day 12: Entropy Reading: 22.6–22.7 (HW 11)	02	03 Day 13: What is entropy? Reading: 22.8 and handout (HW 12)	04
	06 Day 14: Waves Reading: 16.1–16.2 (HW 13)	07 Exam 1 begins	08 Day 15: Waves on a string Reading: 16.3–16.6, PpP 2.1–2.2 (HW 14)	09	10 Day 16: Complex eponentials Reading: PpP 1.1–1.4 (HW 15)	11 Exam 1 ends Lab 3 begins (diffusion)
	13 Day 17: Reflection, transmission, dispersion Reading: PpP 3.1–3.5, 5.1 (HW 16)	14	15 Day 18: Sound waves Reading: 17.1–17.3 (HW 17)	16	17 Day 19: Doppler, superposition Reading: 17.4, 18.1 (HW 18)	18 Lab 3 due Lab 4 & 5 begin (standing waves)
	20	21 Day 20: Standing waves, resonance Reading: 18.2–18.6 (HW 19)	22 Day 21: Beats, uncertainty Reading: 18.7, PpP 4.1 (HW 20)	23	24 Day 22: Fourier transforms Reading: PpP 6.1–6.5 (HW 21)	25 Lab 4 & 5 due Lab 6 begins (Fourier)
	27 Day 23: Fourier transforms, con't Reading: PpP 6.6–6.7 (HW 22)	28	29 Day 24: Music Reading: PpP 7.1–7.3 (HW 23)	01	02 Day 25: Reflection, refraction, dispersion Reading: 35.1–35.5 (HW 24)	03 Exam 2 begins Lab 6 due
	05 Day 26: Huygens, total internal reflection Reading: 35.6–35.8 (HW 25)	06	07 Day 27: Polarization, Brewster Reading: 38.6 (HW 26)	08 Exam 2 ends	09 Day 28: Images from mirrors Reading: 36.1–36.2 (HW 27)	10 Lab 7 begins (Brewster)
March	12 Day 29: Images from lenses Reading: 36.3–36.4 (HW 28)	13	14 Day 30: Aberrations, camera, eye Reading: 36.5–36.7 (HW 29)	15	16 Day 31: Magnifier, telescope Reading: 36.8, 36.10 (HW 30)	17 Lab 7 due Lab 8 begins (Telescope)
	19 Day 32: Interference from slits Reading: 37.1–37.3 (HW 31)	20	21 Day 33: More interference Reading: 37.4–37.6 (and 37.7 if you have it) (HW 32)	22	23 Day 34: Diffraction from wide slits Reading: 38.1–38.2 (HW 33)	24 Lab 8 due Labs 9 & 10 (Interferometer; grating)
	26 Day 35: Resolving, gratings Reading: 38.3–38.5 (HW 34)	27	28 Day 36: Waves in three dimensions; modern optical devices Reading: PpP 8.1–8.3, 10.1–10.4 (HW 35)	29	30 Day 37: Introduction to relativity Reading: 39.1–39.3 (HW 36)	31 Lab 9 due
	02 Exam 3 begins Day 38: Special relativity Reading: 39.4 (HW 37)	03	04 Day 39: Lorentz transforms Reading: 39.5 (HW 38)	05	06 Day 40: Lorentz con't Reading: 39.6 (HW 39)	07 Exam 3 ends Lab 10 due
April	09 Day 41: $E = mc^2$ Reading: 39.7–39.9 (HW 40)	10	11 Day 42: Project Show & Tell Reading: None (HW 41)	12 Reading day	13 Reading day	14 Final Exam starts
	16	17	18 Final Exam ends	19	20	21