

Physics 250 Class Calendar 2009: *Carl Wieman, Louis Deslauriers*

reading quiz dates subject to change

	Mon	Wed	Fri
Week 1	May 4	May 6	May 8
	Intro to me and Louis, goals of class, how run and graded. <b>Assignments-- read differential equations example for Wed.</b> <b>Read papers on learning for Friday. Do CLASS online survey.</b>	Classical wave 2 slit invention activity. Electromagnetic waves ( <b>Radio waves sim</b> ). Energy in waves, classical interaction of light with matter.	<b>Reading quiz</b> on papers on learning  <b>Math and physics diagnostics in class.</b>
Week 2	May 11	May 13	May 15
	Photoelectric effect - <b>use P.E. sim</b> Invent model. Compare classical interpretation of light interaction with matter with what observed. Soccer kicker analogy	<b>Reading Quiz: text 39.1-38.3</b> Photoelectric effect - Phot. El. Applications-- PMT, solid state detectors, eye. 2 slit sim invention activity?	<b>Potential energy activity.</b> 2 slit sim invention activity?
Week 3	May 18	May 20	May 22
	<b>UBC Holiday- Victoria Day</b>	<b>Reading Quiz: 40.1-2.</b> <b>2 slit sim.</b> Probability & Randomness - Wave particle duality.	<b>Reading Quiz: pg 1201 and sect. 39.5</b> Atomic Spectra. Observe discharge lamps with gratings. <b>discharge lamp sim.</b>
Week 4	May 25	May 27	May 29
	<b>Reading quiz 42.8.</b> Applications of spectra for analysis. Lasers. <b>laser sim.</b>	<b>Reading Quiz: 39.4-.7 but skip pg 1229.</b> Balmer Series. Bohr model of hydrogen atom. <b>Bohr Model sim</b>	<b>midterm 1</b> 55 minutes individual. 35 minutes group exam.
Week 5	June 1	June 3	June 5
	Limitations of Bohr model & deBroglie wave model - <b>Bohr Model. sim</b>	<b>Reading quiz 40.3-4.</b> (read matter waves section of chap 25, if have book) Matter waves. <b>Double Slit &amp; Davisson-Germer sims</b>	<b>Wave functions and probability in-class activity.</b>
Week 6	June 8	June 10	June 12
	<b>Reading Quiz: 40.5-6</b> (chap 22 recommended if have book) Wave packets & uncertainty principle <b>sim</b>	<b>Reading Quiz: 41.1-2.</b> Schrodinger equation for free particle - - <b>sim</b>	<b>Wave equations &amp; differential equations solution activity</b>

Week 7	June 15	June 17	June 19
	<b>Reading Quiz: 41.3,4,6, .7.</b> Schrod. eq. cont. Potential energy. - Infinite square well - Finite square well. <b>sim</b>	Tunnelling tutorial activity. <b>sim?</b>	Superposition & measurement. (not in text)
Week 8	June 22	June 24	June 26
	<b>reading quiz 41.10</b> Applications of tunnelling.	Reading Quiz: 42.1-2 Hydrogen atom - <b>sim</b>	<b>midterm 2 55 min. individual, 35 min group</b>
Week 9	June 29	July 1	July 3
	many electron systems, solids & conductivity(not in text)	<b>UBC Holiday -Canada Day</b>	Conductivity cont. Diodes & LEDs (not in text)
Week 10	July 6	July 8	July 10
	<b>reading quiz 37.1-4</b> special relativity--relativity principle, event measurements	<b>reading quiz 37.5-8</b> Simultaneity, length contraction, time dilation.	Laser Cooling & Bose Einstein Condensation
Week 11	July 13	July 15	July 17
	<b>reading quiz 37.9-10</b> Lorentz transformations relativistic energy.	review quantum concept test <b>UBC: last day of lecture class</b>	Last class- Exam review. <b>UBC: last day of tutorial class</b>