

CLASS SCHEDULE FOR 2024WI

Week	Date of class/seminar	Sections of Harris: pre-class reading	Contents of assigned readings and pre-class Thursday quizzes (> wk1)
1	Weds Jan 10	3.1; 3.2	Blackbody radiation; The photoelectric effect
	Thurs Jan 11	3.3; 3.4	The production of X-rays; The Compton effect
2	Weds Jan 17	3.5; 3.6	Pair production; Light acting as both a wave and a particle
	Thurs Jan 18	4.1; 4.2	Double slit experiment with matter; Matter waves
3	Tues Jan 23	4.3	The free-particle Schrödinger equation, wave function and probability density
	Weds Jan 24	4.4; 4.5	The uncertainty principle; The not-unseen observer
	Thurs Jan 25	4.6; 5.1	The Bohr model of the atom; The general Schrödinger equation
4	Weds Jan 31	5.2; 5.3	Stationary states, separation of wfn into spatial and temporal parts; Physical conditions on the wfn.
	Thurs Feb 1	5.4	Behaviour of particles that obey <i>classical</i> mechanics
5	Tues Feb 6	5.5	The infinite well
	Weds Feb 7	Review	Review assignment #2 and review for midterm
	Thurs Feb 8	Midterm	Midterm test (3.1 – 5.5)
6	Tues Feb 13	Review	Review of midterm
	Weds Feb 14	5.6	The finite well
	Thurs Feb 15	5.7	The simple harmonic oscillator
—	Feb 19–23	Reading Week	Reading Week
7	Tues Feb 27	5.8	Expectation values, uncertainties, and operators
	Weds Feb 28	6.1	The potential step
	Thurs Feb 29	6.2	The potential barrier and tunneling
8	Tues Mar 5	7.1	The Schrödinger equation in three dimensions
	Weds Mar 6	7.4	The Schrödinger equation for a central force
	Thurs Mar 7	7.5; 7.6	The hydrogen atom (the angular equation, the radial equation, and finding E_n)
9	Weds Mar 13	7.7	Radial probability density
	Thurs Mar 14	7.8; 8.1	Hydrogenlike atoms, Evidence of angular momentum quantization (mag. dipole moment and spin)
10	Tues Mar 19	8.6	Spin-orbit interaction
	Weds Mar 20	8.7	Adding angular momenta (and labelling hydrogen atom energy levels)
	Thurs Mar 21	8.9	Excitation spectra
11	Weds Mar 27	8.2	Identical particles (symmetric and antisymmetric wfns under exchange)
	Thurs Mar 28	8.3	The exclusion principle (applies to indistinguishable fermions)
12	Tues Apr 2	8.4	Multielectron atoms and the periodic table
	Weds Apr 3	Review	Review assignments #1-3; chapters 3 – 6
	Thurs Apr 4	Review	Review assignments #4,5; chapters 7 & 8