

	Monday	Wednesday	Friday
January 20-23 Lab: Lab skills review		Ch17§1-3 Electric charges, insulators and conductors	Ch17§4-5 Coulomb's law and electric fields
January 26-30 Lab: Coulomb's Law	Ch17§6-7 Superposition, field lines, conductors	Ch17§8-9 Gauss's law	Ch18§1-2 Electric PE and potential difference
Feb 2-6 Lab: Electroscope	Ch18§3 Equipotential surfaces and E-field lines	Ch18 Point charges and dipoles	Ch18§5,7 Capacitors and energy storage
February 9-13 Lab: Potential mapping	Ch19§1 Batteries and electric currents	Ch19§2,3 Resistance, Ohm's Law, EMF	Ch19§4,5 Electrical power; Parallel and series circuits
February 16-20 No lab	and series cont'd - Ch19§7 meters Internal resistance	Ch19§6 Kirchoff's rules	Ch20§1,2 magnets and magnetic fields
February 23-27 Lab: Circuits	Ch20§3,5 Magnetic force and motion in B-fields)	Ch20§6 Torque on a current loop and applications	Ch20§7-9 currents \Rightarrow magnetic fields
March 2-6 Lab: B-field; solenoid	Ch20§10 Ampere's law	Ch21§1,2 Demonstrations of EM induction; flux	Ch21§3,4 Faraday's law and Lenz's law
March 9-13 Lab: Cathode rays	Ch21§5,6 Generators and motional EMF	Maxwell's equations; Changing $\mathbf{E} \Rightarrow \mathbf{B}$ and displacement current	Ch23§1-3 EM waves; wave review; EM spectrum
March 17-28	Spring break!!!		
March 30-April 3 Lab: EM induction	Ch21§5,6 Producing EM waves; polarization; energy	Ch32§1,2,4,5 Light rays; laws of reflection and refraction	Ch32§3 Image formation by mirrors; ray tracing; mirror eq.
April 6-10 No lab	Ch32§6-7 Magnification; Snell's law; total internal reflection;	Image formation by lenses; ray tracing	Ch33§2-3 thin lens equation
April 13-17 Lab: Snell's law	Ch23§11 Wave or particle - take 1 - Huygen's principle	Ch34§3 Interference 2-slit and multislit	Single slit diffraction and Poisson's spot
April 20-24 Lab: Thin lenses	Ch34§5,6 Thin films	Ch35§1,7 Galilean relativity, principle of relativity	Ch36§1 Einstein's postulates and simultaneity
April 27-May 1 Lab: Interference	Ch36§2-4 Ch36§4-6 Time dilation and length contraction	Ch37§2-3 Photoelectric effect	Ch37§4-5 Compton effect, pair production
May 4-8 Lab: H-atom spectrum	Ch37§6,7 Particle waves; de Broglie λ	Ch38§1-3 Bohr Model of hydrogen atom	Ch38§4-5 Wave-functions and uncertainty
May 11 (last class) Final exam May 15	Superposition, cats, and entanglement		Final exam (cumulative) 2pm-5pm (Friday 5/15)