

Course outline*

Wk	#	Date	Day	Topics	Ch, Sec
1	1	1/08	Tue	Introduction, charge, Coulomb's Law, vectors	16.1 – 16.3
	2	1/10	Thu	Electric Field, motion of charges, electrostatics, Gauss's Law	16.4 – 16.7
2	4	1/15	Tue	Electric potential and potential energy, capacitors	16.8 – 17.5
	5	1/17	Thu	Dielectrics, energy in capacitor, current, resistance, EMF	17.6 – 18.2
3	6	1/22	Tue	Kirchoff's Rules, series and parallel circuits, circuit analysis, RC circuits	18.4 – 18.7
	7	1/24	Thu	Power and energy in circuits, circuit measurements, magnetic field	18.8 - 19.1
4	8	1/29	Tue	Magnetic forces on particles and currents, electric and magnetic fields	19.2-19.6
	9	1/31	Thu	Motors and generators, Ampere's Law	19.7-19.9
5	10	2/05	Tue	Review (20 min) 16-18, Hour Exam 1	16-18
	11	2/07	Thu	Faraday's and Lenz's Law, Inductance and LR circuits	20.3, .4, .9, .10
6	12	2/12	Tue	AC Circuits, electromagnetic radiation	21.1 - .4, 22.1 - .2
	13	2/14	Thu	Electromagnetic radiation, polarization	22.3 - 22.7
7	14	2/19	Tue	EM Doppler Effect, light rays, refractions and Snell's Law	22.8 – 23.3
	15	2/21	Thu	Review for Hour Exam 2	19 – 22
8	16	2/26	Tue	Hour Exam 2	19 – 22
	17	2/28	Thu	Reflection, images formed by mirrors	23.4 – 23.8
9	18	3/05	Tue	Thin lenses, magnifier, microscope, interference	23.9, 24.4, .5, 25.1
	19	3/07	Thu	Interference, gratings	25.2 – 25.5
10	20	3/19	Tue	Diffraction and resolution, quantization of electromagnetic radiation	25.6-.8, 27.1-.3
	21	3/21	Thu	Review for Hour Exam 3	23 – 25
11	22	3/26	Tue	Hour Exam 3	23 – 25
	23	3/28	Thu	Early modern ideas about atom, wave-particle duality	27.4-.7, 28.1
12	24	4/02	Tue	Matter waves, confined wave functions, electron configurations	28.2 - 28.7
		4/04	Thu	Lasers, nuclear physics, nuclear binding energy	28.9, 29.1-.2
13	25	4/09	Tue	Radioactivity, biological effects of radioactivity	29.3 - 29.5
	26	4/11	Thu	Catch-up	
14	27	4/16	Tue	Catch-up	
	28	4/18	Thu	Review for Final	
15		4/23	Tue	Study Day, no classes	

Cumulative Common Final Exam: April 30, 2012 1:20 to 3:50 PM

The date, time and location of the exam will be confirmed in class in advance and posted on blackboard.

- **Schedule subject to changes**

