

P225, WINTER, TERM 1: A. JIRASEK, TUES/THURS 12:30 - 2PM, SCI 236

Date	Lecture	Topics	Mazur*	FLP*	Assignment / Quiz
16/09/08	1	Intro, Coulomb's Law, E & M fields, vector fields	Ch 22 All	1.1-3	
16/09/13	2	derivatives of fields, del operator, flux of vector field, Gauss' theorem		2.1-5,7,8, 3.1-4	
16/09/15	3	E field of continuous distributions, Energy assoc w/ E, force on charge	23.1-7		
16/09/20	4	Electric dipole, Flux, Gauss' Law	23.8, 24.1-6		
16/09/22	5	Electric potential, multiple charges, dipole	25.1-7		
16/09/27	6	Gauss' Law differential form, Applications, E field	24, 25	4.1-7, 5.1-10	A1, Q1
16/09/29	7	Field from potential, Laplacian	25.6-7	6.1-6	
16/10/04	8	Capacitance	26.1-5		
16/10/06	9	Dielectrics, polarization	26.7-8	10.1-5, 11.1-5	
16/10/11	10	Current & Resistance	31.1-2	9.1-6	A2
16/10/13	11	Mid term exam			Q2
16/10/18	12	Magnetic field, B from a current, Ampere's Law	27.1-7, 28.5		
16/10/20	13	Ampere's Law, Solenoid, Gauss's Law in Magnetism	28.1-7		
16/10/25	14	Magnetic forces	27.1-7		
16/10/27	15	Magnetic Torques, Motion of charged particles in B fields	28.3-8		
16/11/01	16	Magnetism in Matter, Vector potential, energy of steady currents		14.1-7	A3, Q3
16/11/03	17	Induction, magnetic flux, Faraday's law	29.1-3		
16/11/08	18	Faraday's law, induced fields	29.4-8	17.1-2	
16/11/15	19	E&M fields & waves, displacement current	30.1-2		
16/11/17	20	Maxwell's equations, EM waves	30.4-6	18.1-5	A4, Q4
16/11/22	21	E&M waves, polarization	30.4-6	18.6	
16/11/24	22	Solutions to Maxwell's equations		20.1-4, 21.1-2	
16/11/29	23	Solutions to Maxwell's equations con't		20.1-4, 21.1-2	A5, Q5
16/12/01	24	SPARE			

*Textbooks:

1. Mazur, Principles of Physics, vol 2.

2. Feynman's Lectures on Physics, Vol II, freely available from <http://www.feynmanlectures.info>

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