

Physics 323 Spring 2015

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	Text: Griffiths, "Intro. To Electrodynamics," 4th ed.					
	(ver. 29mar15 12:10)					
week	date	lecture topic	reading			
1	31-Mar	Comment on units. Wave guides	special topic & 9.5.1			
	2-Apr	Rectangular TE & TM modes	special topic & 9.5.2			
2	7-Apr	Coaxial line and termination	special topic & 9.5.3			
	9-Apr	Resonant cavities	special topic			
3	14-Apr	Potential formulation & gauge transformations	10.1.1, 10.1.2			
	16-Apr	Lorentz gauge. Canonical momentum	10.1.3, 10.1.4			
4	21-Apr	Retarded & advanced potentials. Jefimenko's equations	10.2.1, 10.2.2			
	23-Apr	Liéinard-Weichert potentials. Field of point charge	10.3.1, 10.3.2			
5	28-Apr	Radiation. Electric dipole radiation	11.1.1, 11.1.2			
	30-Apr	Magnetic dipole radiation. General radiation.	11.1.3, 11.1.4			
6	5-May	EXAM				
	7-May	Power radiated by a point charge	11.2.1			
7	12-May	Radiation reaction. Abraham-Lorentz formula	11.2.2			
	14-May	Issues with radiation reaction. Damping mechanism	special topic & 11.2.3			
8	19-May	Why is the sky blue? Start special relativity	special topic & 12.1			
	21-May	Review special relativity (continued)	12.1			
9	26-May	Review relativistic mechanics	12.2			
	28-May	Review relativistic mechanics (continued)	12.2			
10	2-Jun	Transformation of the fields	12.3.1, 12.3.2			
	4-Jun	Tensor form of electrodynamics	12.3.3, 12.3.4, 12.3.5			
12	10-Jun	FINAL EXAM				
Note: "Special topic" flags material in lecture beyond the presentation in the text						