Electrodynamics Topic Coverage Across Institutions

We surveyed several institutions regarding their coverage of topics from electrodynamics in their upper-division physics courses. The topics below are organized according to the chapters in Griffiths, *Introduction to Electrodynamics, 3rd Ed.*

Key to institution labels:

A = Small, selective engineering college

B = Large, public research university

CU = Large, public research university (T = Transformed E&M II – FA11, SP12)

D = Small, liberal arts college (as part of a one-semester course)

E = Large, public research university (as part of a one-semester course)

CH	TOPIC	Sub-Topics	A	B	CU 1	CU 2	CU 3	CU T	D	E
1-6	Review	???	X	X	X	X	X	X	NA	NA
7	Electrodynamics	7.1: EMF	X	X	X	X	X	X	X	X
		7.2: Induction	X	X	X	X	X	X	X	X
		7.3: Maxwell's equations	X	X	X	X	X	X	X	X
8	Conservation Laws	8.1: Charge and energy	X		X	X	X	X	X	X
		8.2: Momentum	X		X	X	X	X	X	X
9	EM Waves	9.1: Waves in 1-dimension	X	X	X	X	X	X	X	X
		9.2: EM waves in vacuum	X	X	X	X	X	X	X	X
		9.3: EM waves in matter	X	X	X	X	X	X	X	X
		9.4: Absorption & dispersion	X	X	X	X	X	X	X	X
		9.5: Guided waves	X	X	X		X		X	X
10	Potentials and Fields	10.1: Potential formulation		X	X	X	X	X		X
		10.2: Retarded potentials		X	X	X	X	X		X
		10.3: Point charges			X	X	X	X		X
11	Radiation	11.1: Dipole radiation	X	X	X	X	X	X	X	X
		11.2: Point charge	X	X	X	X	X		X	X
12	Electrodynamics and Relativity	12.1: Special relativity	X		X	X	X	X		
		12.2: Relativistic mechanics	X		X	X	X	X		
		12.3: Relativistic E&M	X		X	X	X	X		
Additional Topics		Linear antennas/arrays			X					
		Phasors/RLC circuits				X	X	X		