Physics for Scientists and Engineers II

Schedule*

Week	Topic	Knight** (Ch.)	Laboratory
	Introduction (Electromagnetism and Matter)		
1	Electric Charge	22	Intro./Electrostatics
	Coulomb's Law	22	
	Holiday		
2	Electric Field	23	Electric Fields
	Electric Flux	24	
	Gauss's Law	24	
3	Electric Potential Energy	25	No Lab
	Electric Potential	25 & 26	
	Exam (Electrostatics)		
4	Magnetism	29	Gauss's Law Tutorial
	Electric Current	27	
	Ampère Force Law	29	
5	Biot–Savart Law	29	Ohm's law
	Lorentz Force Law	—	
	Relativity of Fields	31.1	
6	Ampère's Law	29	Series and Parallel Resistors
	Gauss's Law (for Magnetism)	—	
	Holiday		
7	Electromagnetic Induction	30	RC Circuits
	Maxwell's Equations	31	
	Exam (Magnetostatics & Electromagnetics)		
8	Electrical Networks	28	Magnetic Fields
	Kirchhoff's Laws	28	
	Wires	27	
9	Batteries	28	Current Balance
	Resistors	28	
10	Spring Vacation		No Lab
	Capacitors	23.5	
11	Inductors	30.8	Electromagnetic Induction
	DC Circuits	28.9 & 30.9–.10	
	AC Circuits	32	
12	**Exam (Electrical Circuits)**		AC Circuits
	Waves	—	
	The Wave Equation	—	
13	Solutions to the Wave Equation	—	Interference of Light
	Superposition of Waves	—	
	Wave Optics	33	
14	Geometrical Optics	34	No Lab

	Reflection & Refraction	34	
	Examples of Reflection & Refraction (Spherical Mirrors & Refracting Surfaces)	34	
15	Examples of Reflection & Refraction (Thin Lenses)	34 & 35	Images with Thin Lenses
	Exam (Waves and Optics)		
	Review (Electrostatics & Magnetostatics & Electromagnetics)		
16	Review (Electrical Networks)		Lab Exam
	Review (Waves and Optics)		
17	**Final Exam**		No Lab

*Schedule subject to change.
**Similar information can be found in many other introductory, calculus-based physics textbooks.