Ia	nuary	
WEEK	Tuesday	Thursday
1	22 Introduction	Electric charge; insulators and conductors; Experiment 5: Electrostatic Charge BEFORE CLASS: Read: • § 25.1 – 25.3 • Experiment 51 Problems: • WB: 2, 3, 4, 5, 7, 9, 10, 13, 15, 16, 17, 19, 21 AFTER CLASS: Required: • 1, 5, 6, 7, 8, 29, 33 Additional Practice: • 3 (if you have taken chemistry or PHYS 253), 9, 10, 12, 30, 31, 32
2	29 Coulomb's law; electric forces; Experiment 5 (finish) BEFORE CLASS: Read: • § 25.4 Problems: • WB: 22, 23, 24, 25, 26, 27 AFTER CLASS: Required: • 11, 14, 15, 35, 41, 44, 47, 49, 53, 57, 59 Additional Practice: • 12, 13, 16, 34, 37, 39, 43, 45, 46, 48, 50, 51, 55, 58, 60 Challenge Problems: • 74	BEFORE CLASS: Read: • § 25.5 – 25.6 • Experiment 6, Lab Notes D and E Problems: • WB: 29, 30, 31, 33, 34 AFTER CLASS: Required: • 17, 19, 21, 23, 27, 61, 63, 65, 67, 69 Additional Practice: • 22, 25, 28, 62, 64, 66, 68 Challenge Problems: • 75

WEEK	Tuesday	Thursday
3	Electric field from a single point charge and multiple point charges; Electric field from a continuous distribution; Experiment 6 (finish) BEFORE CLASS: Read: • § 26.1 – 26.3 Problems: • WB: 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 19, 20 AFTER CLASS: Required: • 1, 3, 9, 11, 31, 33, 35, 39, 41, 45, 49 Additional Practice: • 2, 4, 5, 7, 8, 32, 34, 36, 37, 38, 40, 42, 44, 48 Challenge Problems: • 69	TEST 1 (Ch. 25) Electric field from rings, planes, and spheres BEFORE CLASS: Read: • § 26.4 – 26.5 Problems: • WB: 23, 24, 25, 28, 30, 31 AFTER CLASS: Required: • 15, 17, 19, 21 Additional Practice: • 13, 14, 16, 18, 20, 22, 46 Challenge Problems: • 71, 74
4	Motion of charge in an electric field; Experiment 7: Simulating Electric Fields BEFORE CLASS: Read: • § 26.6 – 26.7 • Experiment 7 Problems: • WB: 32, 33, 34, 35, 36, 37, 38 AFTER CLASS: Required: • 23, 25, 27, 43, 51, 53, 57, 59 Additional Practice: • 24, 26, 52, 54, 55, 56, 58, 61	## Symmetry; electric flux; Gauss' law; Experiment 7 (find the content of the con

WEEK	Tuesday	Thursday
5	Using Gauss' law; conductors in electrostatic equilibrium; Experiment 8: Electric Fields from Continuous Charge Distributions BEFORE CLASS: Read: • § 27.5 – 27.6 • Experiment 8 Problems: • WB: 11, 13, 14, 15, 16, 17, 20, 23, 24 AFTER CLASS: Required: • 17, 19, 21, 22, 23, 25, 33, 35, 37, 39, 41, 43, 47, 51 Additional Practice: • 16, 18, 20, 32, 34, 36, 38, 40, 42, 44, 46, 49, 50, 52 Challenge Problems: • 53, 55, 57	21 Experiment 8 (finish)
6	TEST 2 (Ch. 26 & 27) Electron current, electric current, and current density; conductivity and resistivity BEFORE CLASS: Read: • § 28.1 – 28.5 Problems: • WB: 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 20, 21, 22 AFTER CLASS: Required: • 1, 5, 7, 9, 13, 15, 17, 21, 23, 25, 31, 33, 37, 41, 43, 45, 49, 51 Additional Practice: • 2, 3, 6, 8, 10, 11, 12, 14, 16, 18, 19, 20, 22, 24, 26, 27, 32, 35, 36, 38, 40, 42, 44, 46, 48, 50, 52 Challenge Problems: • 53, 57	Electric potential energy; Experiment 9: Batteries, Bulbs, Current (complete) BEFORE CLASS: Read: • § 29.1 – 29.3 • Experiment 9 Problems: • WB: 1, 2, 3, 4, 6, 7, 8, 9, 10, 11 AFTER CLASS: Required: • 1, 5, 7, 9, 37, 41, 44, 49, 53, 55 Additional Practice: • 2, 3, 4, 6, 8, 36, 42, 43, 50, 52, 54, 56 Challenge Problems: • 78, 79, 80

WEEK	Tuesday	Thursday
WEEK	Electric potential; Electric potential from many charges and continuous distributions; Experiment 11: Mapping Equipotentials BEFORE CLASS:	Electric potential and electric field; conductors in electrostatic equilibrium; sources of potential; Experime (finish) BEFORE CLASS:
7	Read: • § 29.4 – 29.7 • Experiment 11 Problems: • WB: 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 29	Read: • § 30.1 – 30.4 Problems: • WB: 1, 2, 3, 4, 5, 6, 8, 10 AFTER CLASS:
-	AFTER CLASS: Required: • 13, 15, 19, 21, 23, 25, 27, 29, 33, 35, 39, 45, 47, 57, 63, 67, 69, 71 Additional Practice: • 11, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 40, 48, 58, 60, 66, 70 Challenge Problems: • 81, 83, 84	Required:
	TEST 3 (Ch. 28 & 29) Electric potential and current; Experiment 10: Current and Voltage in a Circuit BEFORE CLASS:	Electric circuits; Kirchhoff's rules; energy in circuits; resistors in series; Experiment 10 (finish) BEFORE CLASS:
8	Read: • § 30.5 – 30.7 • Experiment 10 Problems: • WB: 15, 16, 17, 18, 19, 20, 21 AFTER CLASS:	Read: • § 31.1 – 31.5 Problems: • WB: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 AFTER CLASS: Required:
	Required: • 15, 17, 21, 23, 25, 51, 55, 59, 61, 65, 66, 70, 71 Additional Practice: • 16, 18, 19, 22, 24, 26, 52, 53, 56, 60, 62, 63, 64, 68, 69 Challenge Problems:	• 3, 5, 7, 9, 11, 13, 15, 17, 21, 47 <u>Additional Practice:</u> • 1, 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 22, 23, 46, 50

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WEEK	18 SPRING BRI	Tuesday EAK	20 SPRING B NO CLASS	FREAK
9	ground; RC of Experiment 1 BEFORE CLASS: Read: • § 31.6 – 31.10 • Experiment 12 Problems: • WB: 16, 18, 19, 20 AFTER CLASS: Required: • 25, 29, 31, 33, 35, 34 Additional Practice:	parallel; networks of resistors; real batteri ircuits; problems using Kirchhoff's rules 2: Ohm's Law – Resistors in Series and 3, 21, 22, 23, 24, 26, 27, 28, 29, 32, 33, 34, 37, 39, 41, 43, 45, 48, 49, 53, 57, 59, 73, 32, 38, 40, 44, 52, 54, 55, 74, 76	BEFORE CLASS: Read: Problems: WB: AFTER CLASS: Required:	t 12 (finish) 2008

	April	
WEEK	Tuesday	Thursday
10	TEST 4 (Ch. 30 & 31) Magnetism and magnetic fields; Experiment 13: Kirchhoff's Rules BEFORE CLASS: Read: • § 32.1 – 32.3 • Experiment 13 Problems: • WB: 2, 3, 6, 7, 8, 9, 10, 11 AFTER CLASS: Required: • 1, 3, 5, 7 Additional Practice: • 2, 4, 6, 8, 9	Magnetic field from a current; magnetic dipoles; Experiment 13 (finish) BEFORE CLASS: Read: • § 32.4 – 32.5 Problems: • WB: 13, 14, 15, 16, 18, 19, 20 AFTER CLASS: Required: • 11, 13, 15, 17, 19, 45, 47, 49, 50, 53 Additional Practice: • 10, 14, 16, 18, 46, 48, 51, 52, 54, 59 Challenge Problems: • 81
11	Ampere's law; field of a solenoid; magnetic force on a moving charge; Experiment 14: RC Circuits BEFORE CLASS: Read: • § 32.6 – 32.7 • Experiment 14 Problems: • WB: 21, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 34 AFTER CLASS: Required: • 21, 23, 25, 27, 29, 31, 55, 63, 65, 66 Additional Practice: • 20, 22, 24, 26, 28, 30, 34, 62, 64, 70 Challenge Problems: • 60, 69	Magnetic forces on current-carrying wires; torques on current-carrying loops; Experiment 14 (finish) BEFORE CLASS: Read: • § 32.8 – 32.9 Problems: • WB: 35, 36, 37, 38, 39, 40, 41, 42 AFTER CLASS: Required: • 36, 37, 39, 41, 43, 71, 73 Additional Practice: • 38, 42, 72, 74 Challenge Problems: • 80

WEEK	Tuesday	Thursday
12	Electromagnetic induction: motional emf; Lenz's law; Faraday's law; Experiment 15: Magnets & Magnetic Fields BEFORE CLASS: Read: • § 33.1 – 33.5 • Experiment 15 Problems: • WB: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 23 AFTER CLASS: Required: • 1, 3, 5, 9, 11, 13, 23, 25, 29, 31, 37, 41, 45, 47 Additional Practice: • 2, 6, 7, 8, 10, 12, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 44, 46 Challenge Problems: • 76, 78	17 TEST 5 (Ch. 32) Inductors; LR and LC circuits; problem session NOTE: only § 33.8 will be on test; Experiment 15 (finis BEFORE CLASS: Read: • § 33.6 – 33.10 Problems: • WB: 24, 25 AFTER CLASS: Required: • 15, 17, 53, 59, 61, 65 Additional Practice: • 14, 16, 54, 62, 66 Challenge Problems: • 81
13	BEFORE CLASS: Read: Problems: AFTER CLASS: Required: Additional Practice:	AC RLC circuits; AC power; problem session BEFORE CLASS: Read: • § 35.1 – 35.6 Problems: • WB:5, 6, 8, 9, 14, 15, 16, 17, 18, 23, 24 AFTER CLASS: Required: • 21, 25, 27, 29, 31, 33, 37, 43, 51, 53, 55, 57, 59a, 63 Additional Practice: • 22, 24, 26, 28, 30, 32, 50, 52, 54, 60a

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WEEK	Tuesday	Thursday
14	Electromagnetic fields, Maxwell's equations, and electromagnetic waves; problem session BEFORE CLASS: Read: • § 34.1 – 34.6 Problems: • WB: 1, 2, 3, 4, 5, 7, 8, 10, 11 AFTER CLASS: Required: • 3, 5, 7, 9, 13, 36, 37 Additional Practice: • 4, 12, 39, 45	TEST 6 (Ch. 33 & 35) [thermo] Macroscopic description of matter; temperature; phase changes; ideal gases BEFORE CLASS: Read: • § 16.1 – 16.6 Problems: • WB: 1 – 12, 14 – 18 AFTER CLASS: Required: • 3, 5, 7, 9, 11, 16, 17, 19, 21, 27, 29, 31, 35, 41, 45, 47, 51, 55, 56, 61 Additional Practice: • 1, 2, 4, 6, 8, 10, 12, 14, 15, 20, 22, 23, 24, 25, 28, 30, 32, 33, 34, 36, 40, 42, 44, 46, 48, 49, 50, 52, 53, 54, 56, 58, 59, 60, 63, 64 Challenge Problems: • 69, 71, 73, 74
15	Final Exam review; E&M problem session; [thermo] Work & heat; thermal properties of solids & liquids; specific & latent heat; calorimetry; adiabatic processes; microscopic BEFORE CLASS: view of gases; thermal energy; specific heat Read: • § 17.1 – 17.7; § 18.1 – 18.6 Problems: • WB17: 1, 2, 3, 4, 6, 7, 9 – 17; WB18: 1, 2, 5 – 12 AFTER CLASS: Required: • Ch17: 1, 3, 5, 7, 9, 11, 13, 15, 19, 21, 25, 29, 33, 39, 43, 47, 49, 55, 57, 61, 63, 67, 71, 74; Ch18: 7, 9, 13, 20 Additional Practice: • Ch17: 2, 4, 6, 8, 10, 12, 14, 16, 17, 20, 22, 23, 24, 26, 27, 31, 34, 35, 36, 37, 38, 41, 42, 45, 46, 48, 50, 51, 53, 54, 59, 62, 64, 65, 66, 68, 69, 72, 73; Ch18: 8, 15, 17, 23	Final Exam review; E&M problem session; [thermo] Experiment 3: Thermal Energy – Mechanical Equivalent of Heat and Experiment 4: Heat Engine BEFORE CLASS: Read: Experiment 3 Experiment 4

	May	
WEEK	Tuesday	Thursday
16	Final Exam review; E&M problem session; [thermo] Heat engines & refrigerators; limits of efficiency; carnot cycle; Experiment 3 and/or 4 (cont'd) BEFORE CLASS: Read: • § 19.1 – 19.6 Problems: • WB: 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19 AFTER CLASS: Required: • 1, 3, 7, 9, 11, 13, 15, 19, 21, 25, 31, 33, 49, 53, 55, 57, 59, 63 Additional Practice: • 2, 4, 5, 8, 10, 12, 14, 16, 20, 22, 23, 24, 26, 32, 35, 47, 48, 52, 56, 58, 60, 61, 62 Challenge Problems: • 34, 69, 72	Final Exam review; E&M problem session [thermo] Experiment 3 and/or 4 (cont'd) TEST (Ch. 16 – 19)
17	20 Final Exam Week FINAL EXAM (cumulative: Ch. 34 is "new" material) 9:30 am - 11:30 am	Pinal Exam Week NO CLASS 20 10 10 10 10 10 10 10 10 10 10 10 10 10