

Modern Physics, Spring 2010

	Monday	Wednesday	Friday
January	4 The Principle of Relativity Six Ideas, Unit R, Chs. 1-2	6 The Nature of Time Chapter 3	8 The Metric Equation Chapter 4
	11 Proper Time PS1 Chapter 5	13 Coordinate Transformations Chapter 6	15 Length Contraction Chapter 7
	18 M. L. King Day	20 The Cosmic Speed Limit Chapter 8	22 Four-Momentum PS2 Chapter 9
	25 Four-Momentum Conservation Chapter 10	27 Applications of 4-Momentum	29 Further Applications PS3
February	1 Review Session and Test (Relativity)	3 Quantum Foundations T and Z, Chs. 4, 5, 7	5 Atomic Spectra Chapter 6
	8 Wavefunctions 7.4 - 7.10	10 Complex Numbers PS4 Handout	12 Particle in a Box 8.1 - 8.4
	15 Presidents Day	17 The Schrodinger Equation 8.5 - 8.7	19 Qualitative Solutions of the S.E. PS5 8.8
	22 Numerical Solutions of the S.E. Handout	24 Harmonic Oscillator 8.9	26 Scattering and Tunneling PS6 Handout
March	1 Review Session and Test (One-Dimensional Q.M.)	3 2-D and 3-D Boxes 9.1 - 9.3	5 Angular Momentum 9.4 - 9.6
	8 Hydrogen Energy Levels PS7 9.7	10 Hydrogen Wavefunctions 9.8 - 9.10	12 Spin 10.1 - 10.3
	15 Spring Break	17 Spring Break	19 Spring Break
	22 Spin Measurements PS8 Handout	24 Magnetic Effects of Spin 10.4 - 10.7	26 Multi-Electron Atoms 11.1 - 11.5
	29 The Periodic Table PS9 11.6 - 11.8	31 Review Session and Test (Three-Dimensional Q.M.)	2 Guest Lecture (Work on projects)
April	5 Guest Lecture (Work on projects)	7 Guest Lecture (Work on projects)	9 Project Presentations
	12 Project Presentations	14 Project Presentations	16 Project Presentations
	19 Project Presentations	21 Project Papers Due 5:00 pm	23 Project Presentations

(Taylor and Zafiratos chapter numbers are for the first edition. Subtract 1 for the second edition.)