

Class Schedule:	Lecture	Reading
Mon, Jan. 5	#1	5.3 Solids Intro 5.3.1 The Free Electron Gas
Wed, Jan. 7	#2	5.3.2 Band Structure
Fri, Jan. 9	#3	5.4 Quantum Statistical Mechanics Intro 5.4.1 An Example 5.4.2 The General Case
Mon, Jan. 12	#4	5.4.3 Most Probable Configuration 5.4.4 Physical Significance α & β
Wed, Jan. 14	#5	5.4.5 The Blackbody Spectrum
Fri, Jan. 16	#6	6.1 Nondegenerate Perturbation Theory
Wed, Jan. 21	#7	6.2 Degenerate Perturbation Theory Intro 6.2.1 Two-Fold Degeneracy
Fri, Jan. 23	#8	6.2.2 Higher-Order Degeneracy
Mon, Jan. 26	#9	6.3 The Fine Structure of Hydrogen Intro 6.3.1 Relativistic Correction
Wed, Jan. 28	#10	6.3.2 Spin-Orbit Coupling
Fri, Jan. 30	#11	6.4 The Zeeman Effect
Mon, Feb. 2	#12	6.5 Hyperfine Splitting
Wed, Feb. 4	#13	Review
Fri, Feb. 6	No Class	Exam I Wed.-Sat. Testing Center
Mon, Feb. 9	#14	7.1 The Variational Principle Theory
Wed, Feb. 11	#15	7.2 The Ground State of Helium
Fri, Feb. 13	#16	8. The WKB Approximation Intro 8.1 The "Classical" Region
Tues, Feb. 17	#17	8.2 Tunneling
Wed, Feb. 18	#18	Special Topics – Atomic Units; Numerical Techniques
Fri, Feb. 20	#19	Special Topics – Numerical Techniques
Mon, Feb. 23	#20	9. Intro 9.1 Two-Level Systems Intro 9.1.1 The Perturbed System
Wed, Feb. 25	#21	9.1.2 Time-Dependent Perturbation Th 9.1.3 Sinusoidal Perturbations
Fri, Feb. 27	No Class	Instructor University Assignment
Mon, Mar. 2	#22	Problem 9.7 – A topic in itself
Wed, Mar. 4	#23	9.2 Emission and Absorption
Fri, Mar. 6	#24	9.3.1 Einstein's A and B Coefficients
Mon, Mar. 9	#25	9.3.2 Lifetime of an Excited State
Wed, Mar. 11	#26	9.3.3 Selection Rules
Fri, Mar. 13	#27	11.1 Introduction to Scattering
Mon, Mar. 16	#28	11.4.1 Integral Form of the Schrödinger Equation
Wed, Mar. 18	#29	11.4.2 The First Born Approximation 11.4.3 The Born Series
Fri, Mar. 20	#30	Review
Mon, Mar. 23	No Class	Exam II Mon.-Wed. Testing Center
Wed, Mar. 25	#31	Special Topics – The Klein-Gordon Equation
Fri, Mar. 27	#32	Special Topics – Klein-Gordon Wave Packet
Mon, Mar. 30	#33	Special Topics – Canonical Momentum
Wed, Apr. 1	#34	Special Topics – Volkov States
Fri, Apr. 3	#35	Special Topics – Wave Packet in a Relativistic Laser Field
Mon, Apr. 6	#36	Special Topics – Compton Scattering
Wed, Apr. 8	#37	Special Topics – The Dirac Equation
Fri, Apr. 10	#38	Special Topics – The Dirac Equation
Mon, Apr. 13	#39	Review
Sat, Apr. 18		Final Exam: In Classroom 2:30PM-5:30PM