

DATE	TOPICS	
Jan. 26	Intro, books, scales P1.1 Micro&Macro	S1
Jan. 31	ThermoLaws:0,1,2 WorkTerm dW	K1.1-4, C1
Feb. 2	Review of IsothermalIsobaricAdiabatic; Entropy	K1.5-10, S5.1
Feb. 7	P1 Stat Mech connections to thermo	
Feb. 9	P1 Classical ideal gas; entropy of mixing	K4.4-5, S5.2-3
Feb. 14	P2 Ensembles, phase space microcanonical	S4, C3.1-2
Feb. 16	P3 Canonical ensemble, heat bath & equilib, Z	K4.6-7, S6.1-2, C3.3-4
Feb. 21	P3 Classical systems, energy fluctuations	C3.6-7
Feb. 23	P3 Equipartition & virial thms, magnetic systems	
Feb. 28 (APS)	P4 Grand canonical ensemble	K4.9,S6.3
Mar. 1 (")	P4 Density & energy fluctuations, phase boundaries	
Mar. 6	P4 Clausius-Clapeyron; P5 Q stat, density matrix	
Mar. 8	P5 Quantum ensembles, simple examples	S7.1-3
Mar. 13	<i>MIDTERM EXAM</i>	
Mar. 15	P6 Ideal gases, monatomic	S6.7
Mar. 20/22	<i>SPRING BREAK</i>	
Mar. 27	P6 Diatomic gases, polyatomic	K6.1,S6.6, C4.9,S7.6
Mar. 29	P6 Chem. equilib	K6.3, S7.6, C4.10,W3
Apr. 3	P7 Vibrations, normal modes	
Apr. 5	P7 Ideal Bose gas	K7.6,B ² -22.8
Apr. 10	P7 Blackbody radiation, Einstein&Debye models,general	K6.2-3,C4.1-3
Apr. 12	P8 ideal Fermi gas; magnetic behavior	K7.5, S7.7, C4.5
Apr. 17	P8 Electron gas in metal, C _v	S7.6.3
Apr. 19	P10 Cluster expansion, virial expansion&coef	K5.1-2
Apr. 24	P12 Phase transitions, condensation, lattice gas	K5.3-5, K5.7, S11.1-3, C5.2-4
Apr. 26	P12 Ising model, approx, transfer matrix, expo	S8.1, C5.1
May 1	P12 Scaling, correlations	S12.1-2
May 3	P12 Ginzburg criterion, Landau thry of phase transitions	K5.8 C6
May 8	More on Landau thry; P13.2 Transfer matrix	
May 10	P16.2-3 Monte Carlo, Mol Dynam; Odds & ends, review	
May 14	<i>FINAL EXAM</i> 8:00-10:00 -> 10:30-12:30	
SUMMER	P15.2-3 Brownian motion, Langevin	C8.8
READING	P15.4,6 FK, Fluct'n-dissip	S10.8, C8.5
	P = Pathria&Beale 3rd	K = Kardar; S = Sethna;
	W = Widom; B ² = Blundell&Blundell;	C = Chandler