



## Preliminary Schedule

Week	Topics	Reading*
1	Thermodynamical systems and postulates	S1, R2
2	Heat, work, energy, and the First Law of Thermodynamics	S1, R4
3	Cyclic processes and thermal engines	S4
4	States, entropy, and the Second Law of Thermodynamics	S2
5	Interacting systems and thermodynamic equilibrium	S3
6	Free energy and thermodynamic phase stability	S5, R3, R8
7	<b>Midterm Exam: Oct. 3</b>	S1-S4
8	Equations of state and thermodynamic phase transformations	S5
9	Thermodynamic potentials (Legendre transformations)	S5
10	Microstates, macrostates, phase space, ensembles, Second Law	R2-R5
11	Classical statistics: Maxwell-Boltzmann distribution	S6, R7
12	Applications: ideal gases, paramagnets, and ferromagnets	S6, R7
13	<b>Midterm Exam: Nov. 14</b>	S1-S6
14	Quantum statistics: Bose-Einstein and Fermi-Dirac distributions	S7, R9
15	Applications: quantum gases, blackbody radiation, solids	S7, R9
16	Systems of interacting particles, computer simulation methods	S8
17	<b>Final Exam: Dec. 13, 10:30 AM</b>	S1-S8

\* S=Schroeder, R=Reif

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<http://www.ndsu.nodak.edu/policy/158.htm>

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