

Physics 831 - 2002
Statistical Physics

Monday, Wednesday, Friday, 3:00 - 3:50 pm, BPS 1400

Instructor: Mark Dykman, BPS 4244, ph. 355-9200x2302
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Office hours: 3:00 – 3:50 pm. Tuesday, and by appointment

Grader: Hyeong-Kwan Kim, BPS 3239
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Office hours: 11:00 – 11:50 am. Thursday, and by appointment

Required Textbook: Kerson Huang, *Statistical Mechanics*, 2nd edition
(Wiley, NY 1987).

Optional textbook: L.D. Landau and E.M. Lifshitz, *Statistical Physics*,
3rd edition, Part 1 (Butterworth-Heinemann, Oxford 1999).

Grading Scheme: weekly problem sets — 40%
one hour midterm exam — 15%
final exam — 45%.
you will have an extra credit problem on the midterm exam

Final grade will be calculated from the sum of the appropriately weighted percentage for each category, not from grades for each category.

Homework assignments will be given on Wednesdays, and are due a week from the day they are given; late homework will not be accepted, generally.

Midterm exam: October 25

Final exam: December 10, 3:00 to 6:00 pm, BPS 1308

You will be allowed to bring one sheet of notebook paper to use on the midterm exam.

Good luck!

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Very Tentative Schedule

Month	Day	Topic	Chapter
Aug.	26 – 30	The laws of thermodynamics	1
Sep	2 – 6	The laws of thermodynamics (continued)	1
Sep	9– 13	Thermodynamic description of phase transitions	2
Sep	16 – 30	Classical statistical mechanics	6
Oct	2–11	Canonical and grand canonical ensembles	7
Oct	14–23	Quantum statistical mechanics	8
Oct	25	Midterm Exam	
Oct	28 – 30	Fermi systems	11
Nov	1 – 8	Fermi systems (continued)	11
Nov	11 – 22	Bose systems. Superfluidity	12, 13
Nov	25 – 29	The Ising model	14
Dec	2 – 6	Critical phenomena	16
Dec	10	Final Exam	