Physics 614

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April 3, 2023

Course Mechanics

Grading

Problem Sets:	40%
Take-home Midterm:	30%
Take-home Last Exam:	19.9%
Class Participation:	10.1%

Collaboration

- Encouraged on problem sets.
- Forbidden (and you will be caught!) on midterm and last exam.

Class Participation

Very important; worth >> 10.1%. In practice, you won't get the other 89.9% without it.

TA

Xiaolu Cheng. Office hours:

Syllabus

I) Grand Canonical Ensemble

   A) Review
   B) Application: Classical Ideal Gas
   C) Energy + Number fluctuations (small)
   D) Bosons + Fermions – Occupation Numbers

E) Bose-Einstein Condensation

F) Black Body Radiation

G) Specific Heat of Solids

H) Fermi Systems

I) White Dwarf Stars

II) Phase Transitions

A) Clapeyron-Clausius Law

B) Supercooling, Nucleation, et. al.

C) Finite Size Effects

D) (If time permits) Magnetic Systems