

PHYS 80002

Statistical Thermodynamics

- Review of basic elements of phenomenological thermodynamics
- Kinetic theory
- Transport equation
- Dilute gases in equilibrium
- Classical statistical mechanics
- Ensemble theory:
 - Microcanonical
 - Canonical
 - Grand canonical ensembles
- Quantum statistical mechanics
- Phase transitions

Optional topics:

- Renormalization group
- Critical phenomena
- Ising model

Level:

- Graduate students: Core requirement.

Offered: Every spring.

Text: A Modern Course in Statistical Physics by L. E. Reichl