

Thermal Physics

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Thermal Physics is a one-semester course required for junior physics majors. It aims to introduce key fundamental concepts in thermal physics. Topics include: heat, probability, temperature and the Boltzmann factor, the first law and energy, isothermal and adiabatic processes, heat engines and the second law, entropy, information and thermodynamics, thermodynamic potentials, and the third law.

Contents

1. Introduction
2. Heat
3. Probability
4. Temperature and the Boltzmann factor
5. Energy
6. Isothermal and adiabatic processes
7. Heat engines and the second law
8. Entropy
9. Information and thermodynamics
10. Thermodynamic potentials
11. Rods, bubbles, and magnets
12. The third law

Reference

S. Blundell and K. Blundell, *Concepts in Thermal Physics*, 2nd ed. (Oxford University Press, 2010); free ebook available via TKU Library.