

Physics 530 -- Statistical and Thermal Physics
SUNY College at Cortland
Physics Department

Catalog Description: A study of the thermal properties of matter from macroscopic and molecular points of view. Topics include heat, temperature, entropy, the laws of thermodynamics, kinetic theory, ensembles and distribution functions, and classical and quantum statistics. Prerequisites: MAT 227, PHY 420. PHY 420 may be taken concurrently.

Required Text: *Thermodynamics, Kinetic Theory, and Statistical Thermodynamics*, by Sears and Salinger (Third Edition)

Course Information:

Fall 2008 Term, 3 credit hours
MW 4:25 - 5:40 pm
Bowers 154

Professor Information:

Dr. Brice Smith
Bowers 143 (office)
Bowers 141 (lab)
brice.smith@cortland.edu

Office Hours: MWF 9:00-10:00am and 12:30-2:00pm
(Please make an appointment if you would like to see me at another time.)

Evaluation of Student Grades will be based on the total points accumulated from the following components:

3 One Hour Exams	80 points each
Final Exam	110 points
Homework	200 points

Maximum Points Possible: 550

Problem sets will typically be handed out on Wednesday and will be due the following Wednesday when an answer key will be provided. Late problem sets will not generally be accepted. A final curve will be established at the end of the course for the assignment of individual letter grades.

Tests: Tests will be given on Sep. 22, Oct. 22, and Nov. 19

Students with a Disability:

If you are a student with a disability and wish to request accommodations, please contact the Office of Student Disability Services located in B-40 VanHoesen or call (607) 753-2066 for an appointment. Information regarding your disability will be treated in a confidential manner. Because many accommodations require early planning, requests for accommodations should be made as early as possible.

PHYSICS 530 -- FALL 2008

<u>Date</u>	<u>Topic</u>	<u>Text</u>
Aug. 25, 27	Introduction Equations of State	Chapter 1 Chapter 2
Sept. 1	<i>Labor Day - No Classes</i>	
Sept. 3, 8, 10	The First Law of Thermodynamics	Chapter 3
Sept. 15, 17	Consequences of the First Law	Chapter 4
Sept. 22	FIRST TEST	
Sept. 24, 29, Oct. 1	The Second Law of Thermodynamics	Chapter 5
Oct. 6, 8	Combined First and Second Laws	Chapter 6
Oct. 13, 15, 20	Thermodynamic Potentials	Chapter 7
Oct. 22	SECOND TEST	
Oct. 27, 29, Nov. 3	Applications of Thermodynamics	Chapter 8
Nov. 5, 10	Kinetic Theory	Chapter 9
Nov. 12, 17	Statistical Thermodynamics	Chapter 11
Nov. 19	THIRD TEST	
Nov. 24	Statistical Thermodynamics (cont.)	Chapter 11
Nov. 26	<i>Thanksgiving Break - No Classes</i>	
Dec. 1, 3	Application of Statistical Mechanics	Chapter 12