

PHYSICS 345 Fall Semester 2007

MWF1:00-1:50 pm Neckers 410

THERMODYNAMICS AND STATISTICAL PHYSICS

INSTRUCTOR: Andrei Kolmakov

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OFFICE HOURS: M, W, F: 12:00 – 13:00 am

PREREQUISITE: PHYS 301, and MATH 251 with grade of C or better

TEXTBOOK: Sears, Francis, and Salinger, Gerhard. (1975) Thermodynamics, Kinetic Theory, and Statistical Thermodynamics, 3rd Ed. Reading, Massachusetts: Addison-Wesley Publishing Company.

Quizzes Approximately 12-14 sets of problems will be assigned during the semester and will count 30% towards the final grade. The marks will be posted at the board near Neckers 407 Lab

EXAMS: There will be two (2) hourly midterm exams. These will each be worth 20% of your total grade. Exams will be closed book, open notes.

FINAL EXAM: You will have a two hour comprehensive final exam during finals week. This will count as 30% of your total grade.

METHOD OF EVALUATION: A 90% - 100%

B 80% - 89.99%

C 70% - 79.9%

D 60% - 69.9%

F BELOW 60%

EXAM DATES: (tentative) Exam 1 – Wed. Sep. 12, 2007 1:00-1:50 pm

Exam 2 – Wed. October 17, 2007 1:00-1:50 pm

Final Exam – Th.; Dec 13; 10:10 am-12:10 pm

TOPICAL OUTLINE:

Week 1 Chapter 1: Fundamental Concepts

Week 2	Chapter 2: Equations of State
Week 3-4	Chapter 3: The First Law of Thermodynamics
Week 5-6	Chapter 4: Some Consequences of the First Law
Week 7-8	Chapter 5: Entropy and the Second Law of Thermodynamics
Week 9-10	Chapter 6: Combined First and Second Laws
Week 11-12	Chapter 7: Thermodynamic Potentials
Week 13-14	Chapter 8: Applications of Thermodynamics to Simple systems
Week 15-16	Chapter 9: Kinetic Theory

Academic dishonesty and student conduct code: visit:
<http://www.siu.edu/~docedit/policies/conduct.html>