

**171.312 Statistical Physics and Thermodynamics**  
**Department of Physics and Astronomy**  
**Johns Hopkins University**  
**Fall 2011**

**Overview**

This course is a one-semester introduction to statistical mechanics and thermodynamics. The basic physical concepts and methods appropriate for the description of many-particle systems will be covered at an advanced undergraduate level.

**Class time and location**

MF 1:30 – 2:45 pm	Bloomberg 361	Lecture
W 1:30 – 2:20 pm	Bloomberg 176	Recitation

**Professor and TA**

Professor Chuck Bennett	Bloomberg room 209	<a href="mailto:cbennett@jhu.edu">cbennett@jhu.edu</a>
Damien Benveniste	Bloomberg room 143	<a href="mailto:dbenveni@pha.jhu.edu">dbenveni@pha.jhu.edu</a>

**Textbook**

“Thermal Physics” by Charles Kittel and Herbert Kroemer  
W.H. Freeman and Company, 2<sup>nd</sup> edition, 1980  
ISBN-13: 978-0-7167-1088-2  
ISBN-10: 0-7167-1088-9

**Grading**

The overall course grade will be based on homework, set approximately weekly, one midterm exam, and a final exam. These will count for 30%, 30% and 40% respectively. The aim of the homework is to help you understand the coursework, so students are encouraged to discuss class material together, but homework must be completed alone.

The final exam will be in the 9:00 am – 12 noon slot on Monday, December 12, as specified by the Office of the Registrar.

**Academic Integrity**

The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. You may consult the associate dean of student affairs and/or the chairman of the Ethics Board beforehand. See the guide on “Academic Ethics for

Undergraduates” and the Ethics Board Web site (<http://ethics.jhu.edu>) for more information.

As a physics student, you learn by developing your knowledge through problem-solving. The problem-solving on the homework is intended to help you learn. Problem-solving on the exams is intended to test your knowledge through the problem-solving skills that you have developed. This process requires that you first try to solve homework problems on your own. If you become stuck or feel that you need to understand more, then books, the web, fellow students, the TA, etc. can all enhance your learning. If you find a published solution to an assigned problem and you simply submit it as your own work, you have learned nothing and you have plagiarized. For homework, you may discuss general approaches and strategies, however you may not effectively “take dictation” in writing out your solutions when explicitly told how to solve a problem, and you may not copy and use someone else’s picture, sketch, or computer code.

Plagiarism goes beyond the literal copying of words or equations. Plagiarism is representing the ideas of others as your own. Citations and credit should be explicitly stated when the writing or ideas of others have been invoked.

### **Disability Services**

Any student with a disability who may need accommodations in this class must obtain an accommodation letter from Student Disability Services, 385 Garland, (410) 516-4720, [studentdisabilityservices@jhu.edu](mailto:studentdisabilityservices@jhu.edu)

### **Illness and Class Attendance**

In the interest of minimizing contagion, students who have flu symptoms should isolate themselves until they have been fever-free for 24 hours.

### **Religious Holidays**

Religious holidays are valid reasons to be excused from class. Students who must miss a class or an examination because of a religious holiday must inform the instructor as early in the semester as possible in order to be excused from class or to make up any work that is missed.

### **Tuesday after Fall Break Day**

Fall break day will be on Monday, October 10. The next day (Tuesday, October 11) classes will meet according to Monday’s schedule. No Tuesday classes will meet that week. This adjustment is being made so an equal number of all class days—thirteen each of Monday through Friday—are held this semester.