

PHYS 309: Syllabus

Fall 2016

Instructor Dr Philip Rodrigues

E-mail prodrigues@phy.olemiss.edu

Phone (662) 915-2673

Office Lewis Hall 211B

Office Hours Wed 3–4 pm, Fri 10–11 am, or by appointment

Website <http://www.phy.olemiss.edu/~prodrigues/phys309>

Lecture Lewis 228, Tue, Thu 11:00am–12:15pm

Required Text Daniel V. Schroeder, *An Introduction to Thermal Physics*, Addison Wesley Longman
2000

Course description

The subject of this course is the physics of systems of many particles, in particular the thermodynamic properties of equilibrium systems. The content can be divided into three main parts: Fundamentals (main concepts of thermodynamics, such as work, heat, temperature and entropy, and the most important examples of systems); Thermodynamical processes and phases; and Statistical mechanics (partition functions and types of statistics, and additional examples of systems). The emphasis will be on understanding the basis of thermodynamics and statistical mechanics.

Significant goals of the course are for students to improve their analytical reasoning and problem solving skills. Part of this consists in “applying equations” and “getting the right result”, but students will be evaluated on a broader set of skills, including the way they analyze a problem and place it in context, and the way they write about it and about general concepts.

Studying for the Course: It is recommended that you read the sections to be covered in a lecture before attending that lecture. This will allow you to better follow the lecture and to take notes more effectively, since you will know which parts of what I say are already in the text and which ones are not. In any case, make sure you read the appropriate sections of the text carefully before attempting the homework problems. After doing the homework, read and think about problems that have not been assigned. In class, ask questions to clarify any doubts you may have about the previous lecture and the homework.

Evaluation

Weights

Homework	15%
Quizzes	15%
Test 1	15%
Test 2	15%
Test 3	15%
Final Exam	25%

Grade ranges

Boundaries may change, but final values will not be higher than these. +/- grades will not be used.

A:	88% and up
B:	75–87%
C:	60–74%
D:	40–59%
F:	< 40%

Homework: Homework problems will be assigned, and assignments will be due on most lecture days; announcements will be made in class and posted on the website. Homework turned in after the time it is due may be accepted, with a grade penalty, but only up to when the corresponding graded assignment is returned to the rest of the class. Students may be excused from turning in an assignment if there is a valid reason.

Homework must be easy to read. Pages must be stapled together, and have smooth (not torn) edges. Answers to questions and problems must always include explanations, and the grade will reflect content, presentation, and English. The lowest homework grade will be dropped.

Quizzes: On most Thursday there will be a short quiz at the beginning of the class, consisting of a few conceptual questions and exercises to be answered in writing. During quizzes, students will not be allowed to use a calculator, equation sheets, books or notes. The lowest quiz grade will be dropped.

Tests: There will be three midterm tests plus a final exam, consisting of problems to be worked out as well as conceptual questions to be answered in writing. Students will be allowed to use a calculator, but no equation sheets, books or notes during the tests. The final will be comprehensive.

Academic Integrity: Academic integrity is essential to all the values upon which the university is founded. A student with a documented case of plagiarism or academic cheating will face the possibility of receiving the grade of F for the course.

Attendance Policy: An attendance policy for this course will not be enforced, other than the fact that absences on quiz and test days will result in missed points towards the students' evaluation, but students are requested to show up for class on time. There will normally be no make-ups for missed quizzes or tests, but in some circumstances one midterm test grade may be dropped.

It is the policy of the University of Mississippi to provide, on a flexible and individual basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities which have been verified through the Office of Student Disability Services need to contact me at the beginning of the semester to discuss their individual needs for accommodations.

Note: If a change in the class policies becomes necessary during the semester, it will be discussed in class before being implemented. After this discussion, the change would be posted on the website.