PHYS 3113   Heat   Fall 2017

Lectures: MWF 1:30-2:20   PS 112
Instructor: Dr. Donghua Zhou   Tel: 744-3277   email: donghua@okstate.edu
Office Hours: You are encouraged to seek help from the instructor often. We can find mutually convenient time by appointment. @ 230 L HBRC
   Please call when you are in the lobby and I will accompany you to my office.
Prerequisites: PHYS 2114 or equivalent and MATH 2163 or concurrent enrollment.
Textbook: An Introduction to Thermal Physics, 1999, by Daniel V. Schroeder.
Course Webpages:
   http://oxygen.hbrc.okstate.edu/3113/ **Main**: syllabus and clicker instruction
   http://oxygen.hbrc.okstate.edu/3113/resources.html **Resources**: notes, reading materials, homework assignments and solutions
   https://online.okstate.edu/d2l/home **D2L**: homework & exam grades are posted here

Course Description

   This course is an introduction to thermodynamics and statistical mechanics. The former deals with macroscopic thermal properties of large systems. The latter provides a microscopic explanation for the macroscopic phenomena. Topics include temperature, energy, heat, work, entropy, laws of thermodynamics, heat engine, refrigerator, Boltzmann statistics, Quantum statistics, etc.

In-class Questions
   Questions will be given in the lectures for you to answer using clickers or mobile devices. Please email me your device ID. Scores will be exported to **D2L** after each lecture. **In-class questions for the first week,** when we are solving potential clicker related problems, **will not be included when calculating the final grade.**

Homework
   Homework will be assigned weekly on the **Resources** page. The assignments consist of discussion, multiple choice, and regular questions. Homework should be turned in to the instructor after lecture on Friday of the following week. Solutions will be posted on the **Resources** page after the due date.

   You are expected to complete your assignments in time. In special cases that can be justified, it is up to the instructor to decide whether to grant extension.
   • Extension requests have to be made within 48 hours after the deadline.
   • 20% of your points will be deduced as penalty.

Exams

   There will be two midterm exams and one final exam, all of which are closed book. No make-up exams will be given unless a valid excuse can be provided (for example, a note from the doctor in case of serious illness). A calculator is allowed and an equation sheet will be provided. The exams consist of discussion, multiple choice questions, and

problems. The final exam is comprehensive. The schedule for the exams will be announced during the semester.

Grades

The final grades will be determined as follows:

Homework	20%
In-class questions	10% [80% participation, 20% correctness]
Midterm 1	20%
Midterm 2	20%
Final exam	30%

The final score will be rounded to the closest integer before applying the grading scale, which is $A \geq 85 > B \geq 75 > C \geq 65 > D \geq 55 > F$. Requests such as converting 74.4 to 75 for B will be ignored.

Request to change grade claiming lost or mistaken homework, clicker, exam, and any other type of scores that cannot be verified will be disregarded. Students should work with the instructor to solve issues of score loss or errors within one week of occurrence, not at the end of the semester.

Academic Conduct and Withdrawals: The University procedures on academic integrity and withdrawals will be strictly enforced. **Cheating on any exam will result in an F! grade for the course.** Please consult the OSU syllabus attachment at http://oxygen.hbrc.okstate.edu/3113/Fall_2017_Syllabus_Attachment_and_Other_Helpful_Resources/Fall_2017_Syllabus_Attachment.pdf on academic integrity and important dates.