Chem 481: Physical Chemistry I: Thermodynamics

Instructor: Prof. Yosuke Kanai

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Include “Chem481” in the subject line.

Office Hours: Caudill 018

   Thursday 11:00 am – 12:00 pm
   Friday 11:00 am – 12:00 pm

   or by appointment.

Prerequisites:

Chem 102 or 102H; Phys 116 and 117, and pre- or co-requisite Math 383.

It is an honor code violation to be enrolled in a course lacking the proper pre- and co-requisites.

Textbook:

“Physical Chemistry” by Peter Atkins and Julio de Paula 9th Edition

Student’s Solution Manual for the textbook

Topics to be covered:

For many students, this is the first chemistry course that requires extensive use of mathematics to master the subject.

Chapter 1: “Properties of Gases”
Chapter 2: “The First Law”
Chapter 3: “The Second Law”
Chapter 4: “Physical Transformations of Pure Substances”
Chapter 5: “Simplex Mixtures”
Chapter 6: “Chemical Equilibrium”

Classroom etiquette:

Once the lecture begins, cell phones need to be put on the vibration mode and conversations should be refrained so that other students are not distracted.
Quizzes, Exams, and Grading:

Homework problems will not be taken up or graded, but it is essential that you do all the assigned ones and possibly more. The solution manual is available. However, I strongly urge you to spend at least 30 minutes on a problem before looking at the solution manual. You will not learn the material otherwise.

Homework

Homework problems will be given from the textbook for students to understand the topics better but will not be graded. Even though the answers are given at the end of the textbook, the detailed procedures/explanations are given only in the solution manual. I strongly urge you to spend at least 30 minutes on a problem before looking at the solution manual.

Quizzes (50 %)

There will be six 30-min quizzes for each chapter. Each quiz will be given at least a week after the chapter is covered in the lectures so that students have enough time to go over the lecture material. Of the six quizzes, the worst one is dropped from being counted toward the final grade of the course.

Final Exam (50%)

The exam will cover all the materials in the course.

Grades*

A:  > 95%
A-: 95% ~ 91%
B+: 90% ~ 85%
B:  84% ~ 80%
B-: 79% ~ 75%
C+: 74% ~ 70%
C:  69% ~ 65%
C-: 64% ~ 60%
D+: 59% ~ 55%
D:  54% ~ 50%
F:  < 50%

* The final grades could be curved favorably such that all the grades are equally shifted upward, depending on the mean grade of the class.
Makeup Exam Policy

No makeup exams will be allowed unless you have received permission in advance. The permission will be granted only for an excusable absence on the day of the exam.

Re-grade Policy

If you wish to have your exam/quiz regraded, download and print the re-grade form from Sakai site. Describe the issue, staple it to your exam/quiz, and return it to my office by the specific date given when the exam/quiz is returned.