

PHYSICAL CHEMISTRY I (01:160:327)
SYLLABUS AND GENERAL INFORMATION
FALL 2016

Lectures: M W 6:40 - 8:00 PM SEC-211

Recitations: Sec 01 W 5:15 – 6:10 PM SEC-216
Sec 02 M 8:15 – 9:10 PM SEC-209 (N.B. shifted by 10 mins.)

Lecturer Dr. Jane Hinch
Office: Wright Lab 180A (Busch)
Phone: 848-445-0663
e-mail: jhinch@rutchem.rutgers.edu
Office hours: M 4:00 - 5:45 PM, or by appointment

Recitation Instructor Dr. Martha Cotter
Office: Wright Lab 158 (Busch) Phone: 848-445-2259
e-mail: martha.cotter@rutgers.edu
Office hours: Tues. 3:00 - 5:00 PM, F 4:30 - 5:30 PM, or by appointment

Textbook: Engel and Reid, *Thermodynamics, Statistical Thermodynamics, & Kinetics*, 3rd Edition

Major topics to be covered: classical thermodynamics, statistical thermodynamics, phase and reaction equilibria, solutions, and kinetics

Hourly Exams (in lecture): Monday, October 17th
Monday, November 21st

Final Exam: Thursday Dec 16th, 2016, 12:00pm -3:00pm
location to be announced.

Quizzes: There will be four 25-point quizzes given in recitation on the dates indicated on the lecture schedule. The lowest quiz grade will be dropped.

Homework and recitation participation: A selection of homework problems relevant to each lecture topic are given on the lecture schedule. Extra problems will be posted during the course of the semester also. They are entirely discretionary although highly recommended. Your solutions to the problems will not be collected but can be discussed in recitation periods. Credit will be given for active participation in all recitation activities.

Grading: There will be a total of 500 points possible in the course, distributed as follows:

hourly exams	2 x 100 pts	=	200 pts
final exam		=	200 pts
quizzes	3 x 25 pts	=	75 pts
recitation participation		=	<u>25 pts</u>
total		=	500 pts

Long-Range Learning Goals: At the end of this course, you should

- have a solid understanding of the basic principles and techniques of classical thermodynamics, statistical thermodynamics, and kinetics, which you should be able to apply in future studies and in your career in science or a related field.
- be able to apply your knowledge of thermodynamics/kinetics to physical transformations, chemical reactions, phase and chemical equilibria, and solutions.
- have an enhanced ability to use mathematics, particularly calculus, as a tool to solve complex chemical and physical problems, starting from first principles.
- have enhanced analytical reasoning and problem-solving skills.

Study Tips: Your performance in Chem 327 will greatly be enhanced by doing the following:

1. Attend lecture regularly. In lecture, I will emphasize important topics, clarify difficult points, and do sample problems.
2. Many quiz and exam problems will be similar to lecture, suggested homework, and recitation problems.
3. Attend and actively participate in recitation each week. Recitation will provide many opportunities to master important concepts and improve your problem-solving skills.
4. Keep up with the course materials. Experience has shown that students who get seriously behind are rarely able to catch up and do well in the course.

Course Website: You are encouraged to make maximum use of the Chemistry 327 website, which is accessed through the Sakai portal at <https://sakai.rutgers.edu/portal>. (Login using your netID and password, then choose PHYS CHEM 327 Thermodynamics F16.) The website features copies of lecture notes, course handouts, and practice exams, plus an announcements board for posting of course announcements. The lecture notes, practice exams, and most of the handouts are pdf files. To read them you must have Adobe Acrobat Reader, which can be downloaded (free) from the Adobe website <http://www.adobe.com>. You are responsible for checking the announcements board regularly for important course announcements.

Academic Integrity: All University policies on academic integrity will strictly be enforced. Any cheating on quizzes, exams, or other assignments or any facilitating of academic dishonesty by others will be dealt with promptly in strict accordance with the Rutgers University Academic Integrity Policy. A copy of the current Academic Integrity Policy, which went into effect on September 1, 2013, can be found at

http://studentconduct.rutgers.edu/wp-content/uploads/sites/46/2014/12/AI_Policy_2013.pdf

Please read the policy carefully if you are not familiar with it.