

CHEMISTRY 440/540

PHYSICAL CHEMISTRY: FALL, 2011.

- Instructor:** Reuben H. Simoyi, SB2 372, phone: 503-725-3895
Email: rsimoyi@pdx.edu
- Venue:** Science Building 1 Theater 107; MWF 12:45 - 13:50
- Office Hours:** M 3 – 4:30 PM. Other times by appointment.
- Text Book:** (a) 'Physical Chemistry; A Molecular Approach' by Donald A. McQuarrie and John D. Simon. (University Science Books, Sausalito, CA). ISBN No. 0-935702-99-7.
(b) 'Problems and Solutions to accompany McQuarrie-Simon's Physical Chemistry, A Molecular Approach; by Heather Cox. ISBN No. 0-935702-43-1.
[These are all available in the Book Store]
- Prerequisites:** Chemistry 320, Physics 213 and Mathematics 254 (including concurrent enrollment)

New, as from Fall 2008:

The department used to offer two P-Chem courses that ran parallel for the Fall and Winter quarters. The two-quarter version of the P-Chem course was supposedly a watered-down version tailor-made for Biochemistry majors, with the full year course being offered to Chemistry majors. For this Fall, both courses have been fused into one. The prerequisites stay the same. Students who may be missing one or two prerequisites should see the professor before registering. The normal venue for Chem 440/540 has always been SB1 304; which is a standard low-tech classroom. This room can only hold 30 students. With the increased numbers of students this fall, the venue has been moved to the modern high-tech lecture theater Cramer 401. Thus the teaching format will also have to

change to suit the venue. The course will now involve the use of power-point and overhead projection. The professor has normally preferred the use of a blackboard and chalk which regulates the pace of the class. With the use of the high-tech gizmos, professors tend to, inadvertently, go faster in delivering their materials.

Course Data Retrieval

Students have been provided with the full course syllabus for the whole quarter as well as the problem sets. This allows the student to read ahead of the class. All the relevant data for the course, including assignments and solutions to some of the assignments can be found on the professor's website: <http://sflow.chem.pdx.edu> (follow the link to Teaching on the left hand applications bar). Solutions to some specific problems not covered in the solutions manual will be posted on this home page the day after the assignments are due.

Grading Procedures:

The following weights will be utilized in determining the overall course grade:

In-course exams (2)	200 points
Final exam (to held on 12/08/08 at 12:30 PM)	200 points
Problem sets (1)	100 points

The two in-class examinations make up 40% of the grade, the final exam is weighted at 40% and the problem sets take the remaining 20%. The final letter grades are determined by the overall performance of the class. In general, 90's and above percentages usually earn a letter grade of A, 80% and above usually fall in the B category. The C grade is determined to be the class average. However, if the class' generation performance does not approach these figures, grades will set to a curve with the standard in-built parameters of 12.5% of the class receiving grades of A and 37.5% of the class receiving grades of A and B, etc. The professor prefers to give the two in-course exams in the evenings, to allow for more time for the exam. This has not been possible the past two years, and so students should be prepared for take-home exams. Instructions on format and decorum of take-home exams will be explained to the class before the exams are handed over. Graded problem sets have been reduced from two to one to allow more time for the two exams. Note that, assignments and exams are all weighted at 20%.

Assignments:

Students will be assigned weekly assignment problems which they are required to work on to evaluate their progress in the course. These assignments will not be collected and will not be graded. The assignment problems are derived from the text (McQuarrie), and the solutions are given at the back of the text book. The solutions manual for the text also contains detailed solutions to all the problems in the text. Student should strive to solve the problems first before they seek the solutions manual. Students will be assigned ONE separate problem set during the course of the quarter. These problem sets will not have solutions. They will be collected and graded to make up 20% of the student's grade. Complete solutions to the assigned problems will be given by the instructor and posted on the Chemistry 440/540 course home page. Students are urged to make use of the web site to reduce paperwork. Assignments have a strict deadline for submission. Students should adhere to these religiously. Any late assignment will automatically be graded out of 50%. An assignment late by more than 4 days will not be graded and the record will reflect a zero. Students should make sure that they keep up with the demands of the course, and should they be falling back, they should seek assistance immediately (either through the instructor's office hours, by appointment, or other private tutoring).

Exams:

There will be two in-course exams, held on the days of lectures 13 and 21. The idea is for the first exam to cover lectures 1 to 12 and the second exam to cover lectures 13 to 21. A take-home exam is 168 hours long. (An equivalent in-class exam, taken in the evenings, would last 90 minutes). Thus, a take-home exam, delivered to the student after lecture 13, should be submitted by the end of lecture 16, etc.

Lectures:

This professor will try to make lectures as interesting and attention-grabbing as possible, even if we are going over mundane physical chemistry principles. The onus is on the student to have a positive attitude towards lectures and not take them as drudgery. The instructor strongly encourages the class' participation at all times. Stop me if you did not quite grasp a fact. Do not let any confusion fester, it can only grow. Do not fall behind! Read up your lecture notes before the next lecture, and also do read ahead of the instructor. ***The professor also insists on students acting professionally, especially during class periods. Cell phones should be switched off, and for the 65 minutes of the lecture, he requires the students' undivided attention.*** Munching, drinking, eating, etc is discouraged. Small conferences, whisperings and other mutterings by students during the course of the lecture can

throw the professor off his stride completely, and can only dilute the quality of instruction the whole class will ultimately receive.

Prerequisites:

Make sure you have the correct prerequisites for this course. Without the proper prerequisites, it will be very difficult to succeed in this course. Prerequisites will be checked during the first week of lectures. Students without the necessary prerequisites should see the professor before the start of the second lecture; or preferably, way before that.

Social Justice:

Portland State University is committed to social justice. The instructor of this course concurs with PSU's commitment and expects to maintain a positive learning environment based upon open communication, mutual respect and non-discrimination. Our university does not discriminate on the basis of race, age, sex, disability, veteran status, religion, sexual orientation, color or national origin. Any suggestions as to how to further such a positive and open environment in this class will be appreciated and given serious consideration.