

CHEMISTRY 440/540

PHYSICAL CHEMISTRY: FALL, 2007.

Instructor: Reuben H. Simoyi, SB2 372, phone: 503-725-3895
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Venue: Science Building 1 Room 304 MWF 12:45 - 13:50

Office Hours: M 3 - 4 PM, W 3 - 4 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 for Fall, 2007

Starting this fall, this course has now been upgraded from 3 to 4 credits. This allows the professor to deliver a more balanced course that covers all the necessary topics needed for an ACS-certified course in physical chemistry. It will also allow the professor to spend some time on some relevant necessary mathematical aspects of the course. Although the course demands two mid-level mathematics courses as prerequisites, invariably, many students have found themselves lost when partial differentials and multi-variables are introduced. The same applies to numerical interpolation techniques.

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-class exams (2)	200 points
Final exam (to held on 12/03/07 at 12:30 PM)	200 points
Problem sets (2)	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.

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 two separate problem sets 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 1 to 21. It is incumbent upon the class to find a suitable time for scheduling exams. Previous classes, and hopefully, this one as well, have opted to hold exams on the (Monday) evenings of lectures 13 and 21. This can give the class 90 minutes for the exam instead of the 60 offered by the class period. Holding the exams during class periods will eat away at nearly 10% of the allocated instruction period for the quarter. If, for some reason, a student just cannot make this particular evening exam time, arrangements can be made for the student to take the exam under the invigilation of the undergraduate examining center. The charge for this facility is \$5. The only problem with this arrangement is that the professor will be unavailable should the student need any assistance during the exam. Problems that can arise during the taking of the exam can be linguistic, typographical, or input-data related... there is always something(!).

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 will be administratively deleted by the professor.

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.