

Spring 2009 - CHEMISTRY 211T (Section R005, R006, R007, R008)

Co-requisite: CHEM 213 - General Chemistry Laboratory II

Instructor – Tao Xu, Office at FW 412, Tel=753-6357 Email=txu@niu.edu (short e-mail questions)

Office Hours – Monday, Wednesday, Friday, 3:00 pm- 4:00pm

Recitation Teaching Assistants – Sean Fanning **TA Office Hours** – to be announced on first recitation

Supplemental Instruction TA – To be announced

Lecture and Recitation Schedule:

Section R005 Lecture MWF, 11:00-11:50, FR 143; Recitation Thursday, 11:00-11:50 FR205

Section R006 Lecture MWF, 11:00-11:50, FR 143; Recitation Thursday, 12:30-13:20 FR205

Section R007 Lecture MWF, 11:00-11:50, FR 143; Recitation Thursday, 14:00-14:50 FR205

Section R008 Lecture MWF, 11:00-11:50, FR 143; Recitation Thursday, 15:30-16:20 FR205

Materials: “*Principles of Chemistry*”, by M. Silberberg (McGraw Hill; 2007)

Tutors and Lab TA Office Hours: The Department of Chemistry and Biochemistry maintains a free Tutor Room for General Chemistry students. The Tutor Room is in Faraday 246 and is staffed Monday through Thursday from 8:30 AM to 3:30 PM with a lunch break. On Fridays, the Tutor Room closes at 2:30 PM. General Chemistry laboratory TA office hours are held in Faraday 211. The laboratory TA office hour schedule is posted outside Faraday 211, in the Tutor Room, and at the departmental stockroom window. Students are also encouraged to ask laboratory TAs for assistance in understanding the lecture material.

Paid Tutors - Names of tutors for hire are available from Linda Davis in Faraday 319.

Exams and Grading

Exams - Tentative dates for the three 100 point hour exams are indicated in the lecture schedule (see next page). For each exam, ~40% questions will be sample questions in lectures, ~30% from the problem sets after each chapters and ~30% from test bank. For Exam 1 and 2, there will be a practice test. **To assure the fairness to everyone, there will be no make-up exams after the general exam unless prior arrangements have been made with the instructor. Legitimate evidence(s) for the excuse(s) of a delayed exam is required, such as a letter from your supervisor or hospital. The evidence(s) will be investigated. A missed exam will be counted as a dropped exam.**

Recitation - The recitation grade (100 points) will be based on four 10-point quizzes, five 7-point homework assignments, and attendance (2 points for each of 14 class meetings). Late assignments will not be accepted. There will be no make-up quizzes.

Final Exam - The 200 point final exam will be comprehensive and will be given on Wed. May 6, 10-11:50 a.m. FR143. **Final Exam will cover ALL chapters.**

Total points = 603 points (hourly exams = 300; recitation = 103; final exam = 200)

Grading scale: A > 90% (540 pts.), B > 80% (480 pts.), C > 70% (420 pts.), D > 60% (360 pts.), F < 60%

Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hours, or when convenient. A letter from Disability Support Services authorizing your accommodations is usually needed before accommodations can be granted.

TENTATIVE LECTURE SCHEDULE

<u>WEEK</u>	<u>CHAPTER/TOPIC</u>	<u>Quiz, Homework, Exam</u>
1. Jan. 12-16	12: Liquids, Solids, and Phase Changes	
2. Jan. 19-23*	12: Continued	
3. Jan. 26- Jan. 30	13: Properties of Solutions	Recitation Quiz 1
4. Feb. 2-6	13: Continued	Homework #1 (Due on Thursday), Exam I (Fri)
5. Feb. 9-13	16: Kinetics	
6. Feb. 16-20	16: Continued	
7. Feb. 23-27	16: Continued, 17: Equilibrium	Recitation Quiz 2 Homework #2(Due on Thursday),
8. March 2-6	17: Continued	
9. March 9-13	Spring Recess	
10. March 16-20	17: Continued / 18: Acid Base Equilibria	Recitation Quiz 3, Homework #3(Due on Thursday)
11. March 23-27	18: Continued	Exam II (Fri)
12. Mar. 30-April 3	19: Ionic Equilibria in Aqueous Systems	
13. April 6-10	19: Continued / 20: Thermodynamics	Recitation Quiz 4, Homework #4(Due on Thursday)
14. April 13-17	20: Continued	
15. April 20-24	21: Electrochemistry	Homework #5(Due on Thursday),Exam III (Fri)
16. April 27-29*	21: Continued	

*Martin Luther King Birthday Jan. 19 (University Close); No lecture on Friday May 1st,

***All homework assignments are available in the course assignment of web-based blackboard. Submit homework to Sean Fanning in the recitation hour on the Thursdays.** Hour exam grades will be post on blackboard ASAP, and will be return to students in the following recitation hour. The original final exam will not be returned, but you can make a copy at your own cost after the grades are post.

Content Objectives of this Course

- Become familiar with the properties of solutions and be able to calculate concentrations of species in solution
- Understand the concepts behind chemical kinetics and reactions rates
- Understand acid-base and ionic equilibria, and appreciate real-world applications of these equilibria
- Understand entropy, free energy, and the direction of chemical reactions
- Understand the difference between voltaic and electrolytic cells, and be able to calculate the cell potential of a voltaic cell