

Spring 2008 - CHEMISTRY 211T (Section B1, B2, B3)

Co-requisite: CHEM 212 - General Chemistry Laboratory II

Pre-requisite: CHEM210T- General Chemistry I

Instructor – Dr. Tao Xu, FW 412 or FW402, 753-6357, txu@niu.edu (short e-mail questions)

Office Hours – Wed and Fri, 1:00PM-2:30PM, or by appointment

Recitation Teaching Assistants – Nicki Potts **TA Office Hours** – Tue and Thu 3:00-4:00pm FW416

Supplemental Instruction TA –TBA

On-Line Course Information (Blackboard): <https://webcourses.niu.edu>

Lecture and Recitation Schedule:

Section B1	Lecture MWF, 11:00 AM, FR 143	Recitation Thu, 9:30 AM FR 205
Section B2	Lecture MWF, 11:00 AM, FR 143	Recitation Thu, 11:00 AM FR 205
Section B3	Lecture MWF, 11:00 AM, FR 143	Recitation Thu, 2:00 PM FR 205

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. The Spring 2008 schedule will be posted outside the door. Most semesters it 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 (departmental office).

Exams and Grading

Exams - Tentative dates for the four 100 point hour exams are indicated in the lecture schedule (see next page). The lowest exam grade will be dropped. There will be no make-up exams unless prior arrangements have been made with the instructor. A missed exam will count as the dropped exam.

Recitation - The recitation grade (100 points possible) will be based on four 10 point quizzes, seven 5 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 Wednesday, May 7th from 10-11:50 AM in FR143.

Total points = 600 points (hourly exams = 300; recitation = 100; final exam = 200)

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

Bonus points: There will be unannounced in-class quizzes for those who attended the lectures, and the bonus points will be added to your final total points. Therefore, you are urged to attend all lectures.

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. 14-18	12: Liquids, Solids, and Phase Changes	
2. Jan. 24-25*	12: Continued	Homework
3. Jan. 28- Feb. 1	13: Properties of Solutions	Recitation Quiz
4. Feb. 4-8	13: Continued / 16: Kinetics	Exam I (Wed)
5. Feb. 11-15	16: Continued	Homework
6. Feb. 18-22	17: Equilibrium	Recitation Quiz
7. Feb. 25-29	17: Continued / 18: Acid Base Equilibria	Exam II (Wed)
8. March 3-7	18: Continued	Homework
9. March 8-16	Spring Recess	
10. March 17-21	18: Continued / 19: Ionic Equilibria in Aqueous Systems	Recitation Quiz
11. March 24-28	19: Continued / 20: Thermodynamics	Exam III (Fri)
12. Mar. 31-April 4	20: Continued	Homework
13. April 7-11	21: Electrochemistry	Homework
14. April 14-18	21: Continued	Recitation Quiz
15. April 21-25	23: Nuclear Reactions	Exam IV (Wed)
16. April 28-30*	23: Continued	

*Martin Luther King Birthday Jan. 21 (University Close); No lecture on Friday May 2nd,

CHEMISTRY 210T - GENERAL EDUCATION AND COURSE CONTENT OBJECTIVES

General Education Course Objectives

- Improve ability to think critically and logically
- Improve ability to reason quantitatively and to perform basic chemical computations
- Improve ability to interpret mathematical models
- Learn how to use the scientific method and theories to understand chemical phenomena
- Develop an appreciation for the importance of the role of chemistry in everyday life
- Develop an understanding of the historical development of the field of chemistry

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
- Understand the nuclear properties of isotopes, including nuclear reactions, and the practical applications of nuclear chemistry.