

FALL 2008 - CHEMISTRY 210T (Section C1, C2, C3, C4)

Co-requisite: CHEM 212 - General Chemistry Laboratory I

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

Office Hours – Monday, Friday, 3:00 pm- 4:00pm, Wednesday 11:00am- 12:00pm

Recitation Teaching Assistants – Mike Recchia **TA Office Hours** – to be announced on first recitation

Supplemental Instruction TA –Kevin Senn, office and hour to be announced

Lecture and Recitation Schedule:

Section C1 Lecture MWF, 2:00-2:50PM, FR 143; Recitation Wednesday, 11:00-11:50AM FR205

Section C2 Lecture MWF, 2:00-2:50PM, FR 143; Recitation Wednesday, 10:00-10:50AM FR238

Section C3 Lecture MWF, 2:00-2:50PM, FR 143; Recitation Wednesday, 3:00-3:50 PM FR 205

Section C4 Lecture MWF, 2:00-2:50PM, FR 143; Recitation Wednesday, 4:00-4:50 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 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 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 count as the dropped exam.**

Recitation - The recitation grade (100 points) 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 Monday.

December 8, 2-3:50 p.m in FR143. **Final Exam will cover ALL chapters.**

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%
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.

LECTURE SCHEDULE

<u>WEEK</u> (3 lectures/week)	<u>CHAPTER/TOPIC</u>	<u>Quiz, Homework*</u> <u>Exam</u>
1. August 25	Introduction / Ch. 1: Keys to the Study of Chemistry	
2. September 1	Ch. 1 (cont.) No lecture on Monday, September 1st - Labor Day Holiday.	
3. September 8	Ch. 2 Components of Matter	Homework #1(Wed) Quiz #1(Wed)
4. September 15	Ch. 3: Stoichiometry of Formulas and Equations	
5. September 22	Ch. 3 (cont.); Ch. 4: Major Classes of Chemical Reactions	Homework#2(Wed) Quiz #2 (Wed) Exam I (Fri)
6. September 29	Ch. 5: Gases and Kinetic Molecular Theory	
7. October 6	Ch. 5 (cont.); Ch. 6: Thermochemistry	Homework#3(Wed)
8. October 13	Ch. 6 (cont.); Ch. 7: Quantum Theory and Atomic Structure	
9. October 20	Ch. 7.(cont);	Homework#4(Wed) Quiz #3(Wed) Exam II (Fri)
10. October 27	Ch. 8. Electron Configuration and Chemical Periodicity	
11. November 3	Ch. 8 (cont.)	Homework#5(Wed)
12. November 10	Ch. 9: Models of Chemical Bonding	Quiz #4 (Wed)
13. November 17	Ch. 10 The Shapes of Molecules	Homework#6(Wed) Exam III (Fri)
14. November 24	Ch. 11: Theories of Covalent Bonding (Thanksgiving Break, no lectures on Wednesday & Friday)	
15. December 1	Ch.11 (cont) and review for all chapters	Homework #7

*Submit homework to Mike Recchia in the recitation hour on the Wednesdays. 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.

CHEMISTRY 210T - GENERAL EDUCATION AND COURSE CONTENT OBJECTIVES

General Education Course Objectives

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

Content Objectives of this Course

- γ Understand the components of atoms and ions
- γ Learn how to write chemical formulas, and how to name compounds
- γ Learn how to balance chemical equations and how to perform simple stoichiometry calculations
- γ Understand the behavior of gases, liquids, and solids
- γ Become familiar with the electronic structure of atoms and understand how chemical reactivity depends on electronic structure
- γ Predict the shapes of complex molecules and ions, and become familiar with the theories of chemical bonding.