

Spring 2010 - CHEMISTRY 211 (Section R005-R008)
Co-requisite: CHEM 213 - General Chemistry Laboratory II

Instructor—Dr. Lee Sunderlin, FW327, 753-6870, sunder@niu.edu
Office Hours —MWF 10:00 – 10:50 or by appointment.

Recitation Teaching Assistants —Nick Kyser Faraday 407 z103564@niu.edu
TA Office Hours - TBA

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

Lecture and Recitation Schedule:

Section R001 Lecture MWF, 11:00 AM, FR 144	Recitation Thursday, 11:00 AM FR 205
Section R002 Lecture MWF, 11:00 AM, FR 144	Recitation Thursday, 12:30 AM FR 205
Section R003 Lecture MWF, 11:00 AM, FR 144	Recitation Thursday, 2:00 PM FR 205
Section R004 Lecture MWF, 11:00 AM, FR 144	Recitation Thursday, 3:30 PM FR 205

Materials: “Principles of Chemistry” 2nd Edition, 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 247** and the schedule will be posted online (http://www.chembio.niu.edu/chembio/aboutus/help_room.shtml) and outside the help room 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 early (~2:30 PM). General Chemistry laboratory TA office hours are held in Faraday 247. 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 (Dept. 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 can be dropped and replaced by the student’s Final Exam score. ***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 when the Final Exam is taken.***

Recitation - The recitation grade (100 points possible) will be based on quizzes, 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 100 point optional final exam will be comprehensive and will be given on Wednesday, May 5th from 10-11:50 AM. The Final exam score can replace your lowest exam score.

Total points = 500 points (hourly exams = 400; recitation = 100; “optional” final exam = 100)

Grading scale: A > 90% (450 pts.), B > 80% (400 pts.), C > 70% (350 pts.), D > 60% (300 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>Exam</u>
1. Jan. 12-16	12: Liquids, Solids, and Phase Changes	
2. Jan. 19-23*	12: Continued	
3. Jan. 26-30	13: Properties of Solutions	
4. Feb. 2-6	13: Continued / 16: Kinetics	Exam I (F) Feb 6
5. Feb. 9-13	16: Continued	
6. Feb. 16-20	17: Equilibrium	
7. Feb. 23-27	17: Continued / 18: Acid Base Equilibria	
8. Mar. 2-6	18: Continued	Exam II (M) Mar 2
9. Mar. 7-15	SPRING RECESS	
10. Mar. 16-20	18: Continued / 19: Ionic Equilibria in Aqueous Systems	
11. Mar. 23-27	19: Continued / 20: Thermodynamics	
12. Mar. 30-April 3	20: Continued	Exam III (F) April 3
13. April 6-10	21: Electrochemistry	
14. April 13-17	21: Continued	
15. April 20 -24	23: Nuclear Reactions	
16. Ap 27-May1*	23: Continued	Exam IV (M) Ap.27
Final May 5 th	Wednesday 10-12 AM	FINAL

*MLK Day Jan 19 (University Closed); Spring Recess March 7-15, May 1 Reading Day (no class)

CHEMISTRY 211 - 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.