Fall 2012 - CHEMISTRY 211-0001
Co-requisite: CHEM 213 - General Chemistry Laboratory II

Instructor - Dr. Elizabeth R. Gaillard, LaT322, 753-6908, gaillard@niu.edu
Office Hours – MW 10:00-10:50 and T 12:00-12:50 or by appointment

Recitation TA – David Kuntz (dkuntz@niu.edu**)**, **TA Office Hours** - TBA
Supplemental Instruction TA - TBA **SI Office Hours** - TBA

On-Line Course Information: Blackboard (https://webcourses.niu.edu)
Materials: *"Principles of Chemistry"*, by M. Silberberg 2nd Edition (McGraw Hill; 2010) and McGraw-Hill Connect (on-line homework). An access code for Connect is bundled with the textbook or you may purchase one on-line the first time that you login to the course website.

Lecture and Recitation Schedule:

Section R001	Lecture MWF, 8:00 AM, FR 143	Recitation Monday, 10:00 AM FR 238
Section R002	Lecture MWF, 8:00 AM, FR 143	Recitation Monday, 11:00 AM FR 238
Section R003	Lecture MWF, 8:00 AM, FR 143	Recitation Monday, 1:00 PM FR 238
Section R004	Lecture MWF, 8:00 AM, FR 143	Recitation Monday, 2:00 PM FR 238

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 Hall 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. General Chemistry laboratory TA office hours are held in Faraday 246. 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 - Dates for three 100 point in-semester 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 (150 points possible) will be based on four 10-point quizzes, eight 10-point homework assignments and attendance (30 points possible). The quizzes will be given during the recitation period as indicated on the lecture schedule (see next page) and there will be no make-up quizzes. The homework will be administered on-line using Connect. Students are strongly encouraged to utilize the LearnSmart study modules in Connect to supplement the homework assignments. Five points of extra credit will be assigned for each completed LearnSmart module.

Final Exam - The 150 point final exam will be comprehensive and will be given on Monday, Dec. 10th from 8-9:50 am.

Total points possible = 500 points (exams = 200, recitation = 150, final exam = 150)

Grading scale: A > 90% (>450), B > 80% (>400), C > 70% (>350), D > 60% (>300), F < 50%

Academic integrity - Good academic work must be based on honesty. Cheating and plagiarism are considered to be serious offenses. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for this course and may be suspended or dismissed from the university.

Any student who may need an accommodation due to a disability, please notify me as early in the semester as possible. It is the responsibility of the student to contact the Disabilities Resource Center at 815-753-1303 in order to initiate and obtain accommodations.

TENTATIVE LECTURE SCHEDULE

WEEK	CHAPTER/TOPIC	Exam/Quiz
1. Aug. 27-31	**12:** Liquids, Solids, and Phase Changes	
2. Sept. 3-7*	**12:** Continued	
3. Sept. 10-14	**13:** Properties of Solutions	**Quiz 1**
4. Sept. 17-21	**13:** Continued / **16:** Kinetics	**Exam 1, Sept. 21**
5. Sept. 24-28	**16:** Continued	
6. Oct. 1-5	**17:** Equilibrium	
7. Oct. 8-12	**17:** Continued / **18:** Acid Base Equilibria	**Quiz 2**
8. Oct. 15-19	**18:** Continued	**Exam 2, Oct. 19**
9. Oct. 22-26	**18:** Continued / **19:** Ionic Equilibria in Aqueous Systems	
10. Oct. 29-Nov. 2	**19:** Continued / **20:** Thermodynamics	
11. Nov. 5-9	**20:** Continued	**Quiz 3**
12. Nov. 12-16	**21:** Electrochemistry	**Exam 3, Nov. 16**
13. Nov. 19-23*	**21:** Continued	
14. Nov. 26-30	**23:** Nuclear Reactions	
15. Dec. 3-7	**23:** Continued	**Quiz 4**
Final: Dec. 10th	8 AM - 9:50AM	**FINAL**

*****Sept. 3 Labor Day (University closed); Nov. 21-25 Thanksgiving Break (University closed)

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.