Summer 2015 – General Chemistry II (CHEMISTRY 211)
Co-requisite: CHEM 213 - General Chemistry Laboratory II

Instructor–Dr. Lee Sunderlin, LaT327, 753-6870, sunder@niu.edu
Office Hours –MTWTh 10:00 – 10:50 or by appointment.
On-Line Course Information (Blackboard): https://webcourses.niu.edu
Lecture Schedule: MTWTh, 11:00 AM – 12:15 PM, LaT 201
note that LaTourette Hall (LaT) is also called Faraday West (FW)
Materials: *"Principles of Chemistry"3rd Edition*, by M. Silberberg (McGraw Hill; 2013) and access to the online HW system McGraw Hill Connect through purchase of a new book, ebook or separately. The ebook version of the textbook is available with ConnectPlus, which provides access to the textbook and online HW.

The course website is at the following address:
http://connect.mheducation.com/class/l-sunderlin-chem-211-summer-2015

Optional Course Preparation: McGraw Hill has an online tool (LearnSmart Prep) to review the background material that you are expected to be proficient in for CHEM 211 (math review and CHEM 210 review). LearnSmart Prep costs $30.
Paid Tutors - Names of tutors for hire are available from Linda Davis in Faraday 319 (Dept. office).
Exams and Grading Dates for the five 100 point exams are indicated in the lecture schedule. The lowest exam grade can be dropped and replaced by the student's "recitation" 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.***
Recitation - The "recitation" grade (100 points possible) will be based on quizzes (10 points each) and 32 online homework assignments (2 points each). Connect assignments labeled "LearnSmart," "extra" or "tours" will not be counted for credit. They are optional assignments to help you master the material. Other material including the practice assignment and math review will also not be counted towards the final grade. Late assignments will lose points as noted in the online homework. There will be no make-up quizzes.
Total points = 500 points (hourly exams = 400; recitation = 100; final exam = 100, lowest score dropped)
Grading scale: A ≥ 93%, A- ≥ 90%, B+ ≥ 87% , B ≥ 83%, B- ≥ 80%, C+ ≥ 77%, C ≥ 70%, D ≥ 60%, F < 60%

TENTATIVE LECTURE SCHEDULE

WEEK	CHAPTER/TOPIC	Exam
1. June 15-18	**12:** Liquids, Solids, and Phase Changes	Quiz 1 June 18
2. June 22-25	**13:** Properties of Solutions / **16:** Kinetics	**Exam I June 25**
3. June 29-July 2	**16:** Continued / **17:** Equilibrium	Quiz 2 July 2
4. July 6-9	**17:** Continued / **18:** Acid Base Equilibria	**Exam II July 9**
5. July 13-16	**18:** Continued/**19:** Ionic Equilibria/	Quiz 3 July 16
6. July 20-23	**20:** Thermodynamics / **21:** Electrochemistry	**Exam III July 23**
7. July 27- 30	**21:** Continued / **23:** Nuclear Reactions	Quiz 4 July 30
8. August 3-6	**23:** Continued	**Exam IV August 5** **Final August 6**

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.

Academic Integrity:

Good academic work must be based on honesty. The attempt of any student to present as his or her own work that which he or she has not produced is regarded by the faculty and administration as a serious offense. Students are considered to have cheated if they copy the work of another during an examination or turn in a paper or an assignment written, in whole or in part, by someone else. Students responsible for, or assisting others in, either cheating or plagiarism on an assignment, quiz, or examination may receive a grade of F for the course involved and may be suspended or dismissed from the university. (Note that working *together* on homework is not considered plagiarism in this class; *copying* another's homework or having someone else do your homework is.) ***Academic Misconduct:*** The penalty for cheating on a test, quiz or HW assignment may be receiving a zero on the item(s) involved.

Accommodations for Students with Disabilities:

A student who believes that reasonable accommodations with respect to course work or other academic requirements may be appropriate in consideration of a disability must (1) provide the required verification of the disability to the Disabilities Resource Center, (2) meet with the Disabilities Resource Center to determine appropriate accommodations, and (3) inform the faculty in charge of the academic activity of the need for accommodation. Students are encouraged to inform the faculty of their requests for accommodations as early as possible in the semester, but must make the requests in a timely enough manner for accommodations to be appropriately considered and reviewed by the university. If contacted by the faculty member, the staff of the Disabilities Resource Center will provide advice about accommodations that may be indicated in the particular case. Students who make requests for reasonable accommodations are expected to follow the policies and procedures of the Disabilities Resource Center in this process, including but not limited to the Student Handbook. A wide range of services can be obtained by students with disabilities, including housing, transportation, adaptation of printed materials, and advocacy with faculty and staff. Students with disabilities who need such services or want more information should contact the Disabilities Resource Center at 815-753-1303.