CHEMISTRY 100 – Chemistry in Everyday Life (Spring 2009)

Time & Place: *T, Th 9:30- 10:45 A.M, Room 121 Davis Hall*
Textbook: Eubanks, Middlecamp, Heltzel and Keller, *Chemistry in Context, 6th Edition*, McGraw-Hill.
Instructor: Dr. Dave Ballantine, Office: Far.West 424, Phone: 753-6857, e-mail: *dballant@niu.edu*
Course webpage: http://webcourses.niu.edu/
Office hours: M-F @11:00AM-12:00 P.M. or by appointment

Lecture	Date	Tentative Topics	Reading
1	Jan. 13th	Why the Spiderweb?	Chapter 0
2	Jan. 15th	The Air We Breathe	Chapter 1
3	Jan. 20th	The Air We Breathe	Chapter 1
4	Jan. 22nd	Protecting the Ozone Layer	Chapter 2
5	Jan. 27th	Protecting the Ozone Layer	Chapter 2
6	Jan. 29th	The Chemistry of Global Warming	Chapter 3
7	Fe. 3rd	The Chemistry of Global Warming	Chapter 3
	Feb. 5th	**EXAM 1 (Ch. 1-3, 100 pts)**	Ch. 1-3
8	Feb. 10th	Energy, Chemistry, and Society	Chapter 4
9	Feb. 12th	Energy, Chemistry, and Society	Chapter 4
10	Feb. 17th	The Water We Drink	Chapter 5
11	Feb. 19th	The Water We Drink	Chapter 5
12	Feb. 24th	Neutralizing the Threat of Acid Rain	Chapter 6
13	Feb. 26th	Neutralizing the Threat of Acid Rain	Chapter 6
14	Mar. 3rd	The Fires of Nuclear Fission	Chapter 7
	Mar. 5th	**EXAM 2 (Ch. 4-6, 100 pts)**	Ch. 4-6
	Mar. 9-13	**SPRING BREAK**	
15	Mar. 17th	The Fires of Nuclear Fission	Chapter 7
16	Mar. 19th	Energy from Electron Transfer	Chapter 8
17	Mar. 24th	Energy from Electron Transfer	Chapter 8
18	Mar. 26th	The World of Plastics and Polymers	Chapter 9
19	Mar. 31st	The World of Plastics and Polymers	Chapter 9
	Apr. 2nd	**EXAM 3 (Ch. 7-9, 100 pts)**	Ch. 7-9
20	Apr. 7th	Manipulating Molecules and Designing Drugs	Chapter 10
21	Apr. 9th	Manipulating Molecules and Designing Drugs	Chapter 10
22	Apr. 14th	Nutrition: Food for Thought	Chapter 11
23	Apr. 16th	Nutrition: Food for Thought	Chapter 11
24	Apr. 21st	Nutrition: Food for Thought	Chapter 11
25	Apr. 23rd	Genetic Engineering and the Molecules of Life	Chapter 12
26	Apr. 28th	Genetic Engineering and the Molecules of Life	Chapter 12
	Apr. 30th	**EXAM 4 (Ch. 10-12, 100 pts)**	Ch. 10-12
	May 7th	**FINAL EXAM (cumulative, 200 pts.) @ 10:00-11:50**	

Grading:

1. There will be four exams each worth 100 points, and a cumulative final exam worth 200 pts.. **No make up exams will be given** as one chapter exam or the class participation part (see below) will be dropped, whichever has the fewest points. All exams will be multiple choices and graded by scantron. Original scantron sheets will not be returned.

2. Total possible points for Chem 100: 600 (four exams + final) + 100 (class participation) = 700. When one exam or the class participation part is dropped, the maximum points are 600. The grades will be determined according to the percentage out of the total possible 600 points:

   90% or greater = A; 80-89% = B; 70-79% = C; 60-69% = D; and 59% or less = F

Class participation:

Our class uses the clicker system. Your class participation is recorded from the responses you give to the system. Normally we have about 5 to 10 question in each lecture. If you respond to a question you receive points. If you do not answer the question (not participating in class), you receive no points For instructions on how to use the clicker, please refer to the Blackboard website. From the front page of the course website, click on the <Tools> tab on the left side of the page, and then click on the "CPC Connection" icon. You can register your clicker in the class and find links for additional help.

Calculators:

A calculator with scientific notation and logarithms should be brought to all exams.

Optional studying materials:

For further help, the Chemistry help room (Faraday Hall Room 246) is open 8:30-11:15 AM and 11:45 AM-3:30 PM, Mondays, Tuesdays and Thursdays. On Wednesdays, the room is open 8:30-11:50 AM and 1:00-3:30 PM. After 10 AM of the Wednesday in the finals week, the room will be closed. It is strongly recommended that you visit the help rooms at times other than right before an exam. If you feel the need for a personal tutor, a list of potential tutors is available from the departmental secretary in the departmental office (Linda Davis, FR 319).

NIU abides by Section 504 of the Rehabilitation Act of 1973 regarding provision of reasonable accommodations for students with documented disabilities. Moreover, your academic success is of importance to me. If you have a disability that may have a negative impact on your performance in this course and you require some type of instructional and/or examination accommodation, please contact me early in the semester so that I can provide or facilitate in providing accommodations you may need. If you have not already done so, you will need to register with the Center for Access-Ability Resources (CAAR), the designated office on campus to provide services and administer exams with accommodations for students with disabilities. CAAR is located on the 4th floor of the University Health Services building (753-1303).

General Education Course Objectives

- Improve ability to think critically and logically;
- Improve ability to reason quantitatively and to perform basic chemical computations;
- 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; and
- Develop an understanding of the historical development of the field of chemistry.

Content Objectives of This Course

- Understand the importance of chemistry in our society
- Learn basic chemical formulas, reactions and applications.
- Become knowledgeable about the connection between chemistry and pollution, health care, energy, nutrition and life at the molecular level.