

## Chemistry and Society

CHE 112\_003

Spring 2008

Time: TR 9:25-10:40

Place: 308

Instructor: Dr. Bradley Sieve

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SC 452, ext 6547

Office Hours: Tue 11-12,5-5:50; Wed. 1-2; Thur. 1-1:40

I have an open door policy. Please feel free to stop by if you ever have questions, or contact me if you want to set up an appointment.

### Student Learning Outcomes:

- 1) Students will be able to summarize the interrelationship of chemistry and society in general
- 2) Students will demonstrate understanding in the creation and use of the periodic table of elements.
- 3) Students will appreciate unit analysis in the solving of chemical based story problems
- 4) Students will be able to describe basic types of chemical reactions and their products
- 5) Students will be able to illustrate the basic use of mathematics and the concepts such as moles to comprehend chemical interactions

In fulfilling these student learning outcomes the student will also fulfill the following departmental learning outcomes:

1. Explain the major concepts and experimental findings in the chemical sciences.
2. Evaluate the relationships between chemistry and mathematics, physics, biology, and other disciplines and between chemistry and society.
3. Apply computer technology and other technologies in the comprehension, interpretation, and presentation of the chemical sciences.

Prerequisite: None

Required Text: Chemistry for Changing Times (11th ed), J. W. Hill and D. K. Kolb

This is a web enhance course. Students meet regularly scheduled class time and will need access to the internet to fulfill course requirements.

Attendance: Attendance is required for this course. To assure that this is completed two methods will be employed. The first is short unannounced quizzes will be given where no make-up quizzes will be given for any reason. Second a question will be asked of a random pre-selected student at the beginning of the class. If your name is selected three things can happen. First if you are present and answer the question correctly you will received 1% extra credit on your final grade. If you are present but do not answer correctly you will stay at the 3% awarded for attendance only. If you are absent then your attendance grade will drop 1% from 3% to 2% etc. gained for the term. This system will be repeated if your name is chosen multiple times. Due to the possibility of multiple questions to the same student the range of credit will be from 0 to 6% (3% extra credit will be maximum) for attendance. Also note that discussions during clipping days will be used for the exams so attendance there will be required to answer those questions.

Suggested Problems: Exercises, questions, and problems from the text will be suggested for each chapter. These will not be collected though working through them is to your great advantage. Students will be responsible for the material covered in the suggested problems whether covered directly in lecture or not.

Assigned Readings: Assigned reading may be assigned throughout the semester and should be completed before the next class meeting. At the beginning of lectures the instructor may ask questions concerning the assigned readings to insure they are completed as suggested and understood. Be sure to stay about half a chapter ahead of the current lecture as that is normally about the amount that will be covered in a lecture.

Homework: Along with suggested problems homework problems will be handed out during the course. These problems are designed to help ensure your understanding of the material presented in the lecture and prepare you from the exams. The questions will be asked and graded through the blackboard system so you will be required to have access to this system. These will be due at the beginning of class on the due date or shortly there after. If you miss a lecture where homework is assigned it is your responsibility to find out the homework assignment from other students and the due date. The reason for the homework given online is two fold, first this allows multiple attempts at the homework and feedback to the questions and second it stops students from simply copying from each other before class on the due date. Expect a short homework set for each chapter covered.

Quizzes: Short in-class quizzes will be given throughout the semester. These quizzes may be announced or unannounced to address student's preparedness for lecture and the understanding of the course material. Make up quizzes will not be given though the lowest quiz score for the term will be dropped.

Clipping Assignments: Once ever three weeks students will submit in blackboard a chemistry related article (reference or pdf) from a current newspaper or magazine (last 2 week time period). Along with the article the student will hand in a one page typed summary of the article submitted through the blackboard system. This summary should include at least one paragraph in your own words describing the contents of the article and at least one paragraph describing your personal thoughts about the article particularly how the article can effect or shape society. Grading will be done 40% on content (theme summarized and presented correctly), 40% on opinion section (particularly is the opinion of the student presented clearly and supported), and finally 20% on completion (is it typed, long enough, grammatically correct). Finally, during the days that the clippings are due random students will be called on to discuss their article so the class can see that issues involving chemistry are important to society in general.

Term Paper: During the term each student will be required to complete a topic paper ( 3-6 pages typed) highlighting the relationship between chemistry and society in everyday life. This could include but is not limited to your personal career goals, political aspects or environmental concerns. Students are encouraged to choose topics they care or are interested in. This paper can be presented in an informative or persuasive manner chosen by the student. Grading will be completed in a manner similar to the clipping assignments described above but with a much deeper scope. Differing from the clippings assignment though the students will be required to present 3 reference sources that are print in nature. Reference librarians are great for helping you with this. More detailed information about this project will be presented in the first week of classes.

Exams and Grading: There will be 4 exams and a Final Exam during the semester. The final exam will be cumulative. **No make up exams will be given.** A student missing an exam must notify the instructor in advance. On the instructor's discretion, the student may then use the final exam score to count for one exam. This policy only applies to a maximum of one exam.

Percentages used in Final Grade:

Homework	10 %
Quizzes	10 %
Clippings	10 %
Term Paper	15 %
Exams	40 % (10% * 4)
Final	12 %
Attendance	3 %

Final Exam (Comprehensive)

See final schedule for your sections exam date and time

Calculators: During the semester some calculations will be necessary, so each student should have a **nonprogrammable** scientific calculator with them each day (programmable calculators and cell phone calculators will not be allowed during quizzes and exams). Also there will be no sharing of calculators between students in class. **Forgetting or bringing the wrong calculator to class is no excuse and the student will have to complete the exam/quiz without the use of a calculator.**

Not all material in each chapter will be covered. Sections to be omitted will be announced at the beginning of each chapter. Though a section is omitted it may help in your understanding and interest, so don't be afraid to read these sections also. Readings from other chapters in the text or other sources may also be required as seen fit.

**Policies of the Department of Chemistry at Northern Kentucky University:**

- All items on the syllabus are subject to change at the discretion of the instructor
- Students are responsible for reading and understanding the syllabus. Any items that are not understood need to be brought to the attention of the instructor within the first two weeks of the semester
- The work that you do in this course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.
- Cheating will not be tolerated. Faculty members have the right to determine actions to be taken when a student is caught cheating.
- Faculty members have the right to dismiss or have removed disruptive students from their classroom.

Students with disabilities who require accommodations (academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859-572-6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accommodations. Visit the Disability Services website at [www.nku.edu/~disability/](http://www.nku.edu/~disability/).

*No cell phones or pagers will ring or be used in the class. Also no use of tobacco products will be allowed in the classroom.*

## Schedule

### 112 schedule

<u>Date</u>	<u>Item</u>
Jan 24	Homework 1 Due
29	Clipping 1 Due
Feb 7	Homework 2 and 3 Due
	Exam 1
19	Clipping 2 Due
21	Homework 4 Due
March 4	Term Paper Idea Due
6	Homework 5 Due
	Exam 2
18	Clipping 3 Due
27	Homework 6 Due
April 1	Term Paper Rough Draft Due
8	Clipping 4 Due
10	Homework 7 Due
	Exam 3
22	Term Paper Due
24	Homework 8 Due
29	Clipping 5 Due
	Exam 4

Final will be during final week. Check schedule for date and time.