CHEMISTRY 110 - Section 3: Spring 2013

Time & Place:  T/Th 6:00 - 7:15 p.m., Faraday Hall 143
Instructor:  Dr. Oliver Hofstetter, Office: La Tourette Hall 428, Phone: 753-6898, e-mail: ohofst@niu.edu
Course webpage:  http://webcourses.niu.edu/
Office hours:  T/W 10:50-11:50 a.m. or by appointment

TENTATIVE LECTURE SCHEDULE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>CHAPTER/TOPIC</th>
<th>EXAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Jan. 15/17</td>
<td>Introduction/Chapter 1 (Sections 1.1-1.2)</td>
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<td>2. Jan. 22/24</td>
<td>Chapter 1 (Sect. 1.3-1.4)</td>
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<td>3. Jan. 29/31</td>
<td>Chapter 1 (Sect. 1.5); Chapter 2 (Sect. 2.1-2.5)</td>
<td>Exam 1 (Feb. 7): Ch. 1,2</td>
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<td>4. Feb. 5/7</td>
<td>Chapter 2 (Sect. 2.6-2.7)</td>
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<td>5. Feb. 12/14</td>
<td>Chapter 3 (Sect. 3.1-3.2)</td>
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<td>6. Feb. 19/21</td>
<td>Chapter 3 (Sect. 3.3-3.5); Chapter 4 (Sect. 4.1)</td>
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<td>7. Feb. 26/28</td>
<td>Chapter 4 (Sect. 4.2-4.3)</td>
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<td>8. Mar. 5/7</td>
<td>Chapter 4 (Sect. 4.4-4.5)</td>
<td>Exam 2 (Mar. 7): Ch. 3,4</td>
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<td>9. Mar. 12/14</td>
<td>SPRING BREAK</td>
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<tr>
<td>10. Mar. 19/21</td>
<td>Chapter 5 (Sections 5.1 -5.2)</td>
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<td>11. Mar. 26/28</td>
<td>Chapter 5 (Sect. 5.3); Chapter 6 (Sect. 6.1-6.4)</td>
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<tr>
<td>12. Apr. 2/4</td>
<td>Chapter 6 (Sect. 6.5); Chapter 7 (Sect. 7.1-7.2)</td>
<td>Exam 3 (Apr. 4): Ch. 5,6</td>
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<td>13. Apr. 9/11</td>
<td>Chapter 7 (Sect. 7.3-7.4)</td>
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<td>14. Apr. 16/18</td>
<td>Chapter 8 (Sect. 8.1-8.2)</td>
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<td>15. Apr. 23/25</td>
<td>Chapter 8 (Sect. 8.3-8.5)</td>
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<td>16. Apr. 30/May 2</td>
<td>Chapter 9 (Section 9.1-9.7)</td>
<td>Exam 4 (May. 2): Ch. 7,8,9</td>
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FINAL EXAM (comprehensive): Tuesday, May 7th, 6:00 -7:50 pm

Grading: Hourly Exams (Exams 1-4) 400 pts
Cumulative Final Exam 100 pts.
Web Homework (average of all assignments) 100 pts.
Total 600 pts.*

* There will be four hourly exams and a final exam worth 100 points each. No make up exams will be given. All exams will be multiple choice and graded by Scantron. Original Scantron sheets will not be returned to you. An additional 100 pts will be based on your performance on on-line homework assignments, which will be available through the University’s Blackboard site at http://webcourses.niu.edu/ Your homework score will be based on the average of all web homework assignments, with 100 pts. being the maximum score. More information on the homework assignment is given below.

IMPORTANT: The lowest score from one of the five exams or your averaged homework score will be dropped; therefore, the maximum number of points that will count towards the final letter grade is 500 points. If you like the grade you have based on the 4 hourly exams and your averaged homework score, you do not have to take the final (it will be the test dropped). The grading will be as follows:

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

This scale may be revised downward (not upward), but this is not guaranteed.
Calculators:
A standard calculator with scientific notation and logarithm function should be brought to all exams. The calculator may not contain any stored equations, structures, or any other information pertaining to the class.

Web Homework:
On-line homework assignments will only be available to students who have purchased a “Connect Access Code,” either with their textbook, or separately.
In order to register for “Connect,” go to the University’s Blackboard site at http://webcourses.niu.edu/, and from there to this course’s website (CHEM 110 – Section 3). There, you will find a link (Registration), which will lead to the textbook publisher’s website. You will need to register at this website using the access code found in your textbook (or purchased separately).
Typically, there will be one or two homework sets per chapter. The total points for the semester will be normalized to 100, equivalent to those of one exam. Although the homework is not mandatory, it is strongly recommended that you do it, as you can use the points (maximum 100) to substitute one exam. In addition, there are many useful tools at the website (such as ebook) to help you understand the course materials.
The main purpose of the on-line homework is to strengthen your understanding of the course materials, which will help you to do well on the exams. Note that each on-line homework assignment will be available only around the time the corresponding chapter is being taught, i.e., during the period from start of the chapter to one week after the chapter is finished. No makeup homework will be given.

Opportunity for Extra Credit:
The textbook publisher offers a web-based adaptive learning system, LearnSmart, which is “designed to help students learn faster, study more efficiently, and retain more knowledge for greater success.” LearnSmart will also be available through this course’s website (CHEM 110 – Section 3) at the University’s Blackboard site at http://webcourses.niu.edu/ once you have registered for “Connect” (Note, you will only have to register once to access both, the homework site AND LearnSmart).
Based on your performance on LearnSmart, you may earn up to a maximum of 50 bonus points. These points will be added to your maximum of 500 points earned on exams/homework (see above).

Optional studying materials:
If you are unsure of your math background, the book Math Survival Guide by Jeffery R. Appling (John Wiley & Sons, Inc.), or Basic Mathematics for Beginning Chemistry by D. M. Goldish (Fourth edition, Macmillan, New York, © 1990) is recommended. There is also a “Student Study Guide” accompanying the textbook available, and many students will find it useful.

Other resources:
The course website (under http://webcourses.niu.edu/) will feature important announcements, links to homework assignments and LearnSmart, practice exams, and lecture Powerpoint slides for downloading. Check the site regularly, especially if you miss a class period.
For further help, the Chemistry help room (Faraday Hall 247) is typically open from 8:00 a.m.-5:00 p.m. (with a lunch break), Monday through Thursday, and on Friday mornings until noon. It is strongly recommended that you visit the help room at times other than right before an exam. Names of personal tutors are available from Linda Davis in FR 319 (the department office). Students in CHEM 111 can also ask their TAs for assistance in understanding the lecture material.

NIU abides by Section 504 of the Rehabilitation Act of 1973 which mandates reasonable accommodations be provided for qualified students with disabilities. If you have a disability and may 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 Disability Resource Center (DRC; formerly Center for Access-Ability Resources), the designated office on campus to provide services and administer exams with accommodations for students with disabilities. The DRC office is located on the 4th floor of the University Health Services building (815-753-1303).

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 concepts of matter and energy and become acquainted with metric and SI units of measurement;
• Understand the electronic arrangement in atoms and the periodic properties of elements;
• Learn how to write chemical formulas, name compounds, and to perform simple chemical calculations;
• Familiarity with the behavior of gases, liquids, and solids;
• Become knowledgeable about the properties of aqueous solutions;
• Learn how to work safely in the chemistry laboratory (Chem 111 students only); and
• Learn how to manipulate scientific equipment and carry out simple laboratory experiments (Chem 111 students only).