CHEM 105X – General Chemistry I, 4 Credits  
Course Syllabus  
Summer 2011

INSTRUCTOR:  
Dr. Dana Haagenson  
Office: Reichardt 192  
Phone: 907.474.7118  
E-mail: dchaagenson@alaska.edu

OFFICE HOURS:  
Tue/Thu 8:00-9:00  
Tue/Thu 3:00-4:00  
Wed most of the day  
(or whenever I’m around)

SCHEDULE:  
Lecture: TR 9:00-11:00am, REIC 202  
Laboratory: W 8:30am-12:15pm, REIC 246

REQUIRED MATERIALS:  

OWL access card for Chemistry and Chemical Reactivity 7th Ed (1-semester or 2-semester)

American Chemical Society (ACS) General Chemistry Study Guide (covers both 105 and 106)  

A non-programmable, non-graphing scientific calculator is necessary.

OPTIONAL MATERIALS:  


Essential Algebra for Chemistry Students, 2nd Ed. D. W. Ball 0-495-01327-7

COURSE CONTENT: CHEM F105X will cover Chap 1-11 of the text. Major subjects include measurements, calculations, atomic and molecular structure, gas laws, stoichiometry, an introduction to organic chemistry, chemical reactions and related energy changes.

GRADES: The course grade will be based on the total points earned from exams, quizzes, homework, lab reports, and the final exam. These are weighted as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exams</td>
<td>40%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Homework</td>
<td>20%</td>
</tr>
<tr>
<td>Lab</td>
<td>20%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100%</td>
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</tbody>
</table>

The “guaranteed” grading scale is as follows: A, 90%  B, 80%  C, 70%  D, 60%. The guarantee is that while these cutoffs may go down, they will not go up. Any concerns regarding graded material must be addressed within one week from the time the material is returned to the class. No grades will be changed after that point. Also, any work that is approved for make-up must be completed within one week from the original due date.

EXAMS: There will be four exams plus a final exam. You will be given at least one week’s notice before an exam is given. Exams will be given after two to three chapters from the text are covered.
**FINAL EXAM:** The final exam will be given during the last class period: Thursday, August 11th from 9-11am. The exam will be comprehensive.

**HOMEWORK:** Homework assignments will be executed using a computerized system called OWL: Online Web-based Learning). OWL will post assignment deadlines and store homework grades automatically. Students are responsible for keeping track of assignment deadlines.

Success in Chem 105 requires practice doing problems. Higher achievement on exams is usually a direct result of time spent doing homework assignments in their entirety.

Each OWL homework set will have a list of “optional” and “required” problems. The optional problems will not be used in calculating your final grade. The following rules apply:
1) Units must be mastered before the due date for credit. There will be no extensions granted.
2) You have 5 attempts to master a unit. Note that once you open a unit, it will be considered an attempt regardless of whether you proceed with the problem.
3) OWL will provide excellent feedback on how to solve the problem. Be sure to fully understand the feedback on any missed unit before you proceed with your next attempt.

To register:
Go to [http://owl.cengage.com](http://owl.cengage.com)

**QUIZZES:** If the instructor feels that student performance in the class is satisfactory, quizzes will not be given. However, at any point during the course quizzes may be utilized and if so, will be included as part of the homework grade.

**LABORATORY:** An important component of Chem 105 is a weekly three-hour laboratory session. The purpose of the lab is to reinforce lecture concepts through hands-on investigation. Lab sessions help students to learn about the safe handling of chemicals and the use of common lab equipment. In addition, students are introduced to the concepts of scientific reasoning and experimental design. The labs will be supervised by graduate and upper division undergraduate teaching assistants. Teaching assistants will have specific office hours during which they will be available to answer questions related to the lab assignments. More than 10 experiments are scheduled during the semester. The laboratory portion of your grade will be based on the scores obtained on your best 10 lab reports. All students enrolled in Chem 105 must attend laboratory. **Students completing (including turning in reports) fewer than 8 lab exercises will fail the entire course.** Lab reports will be handed in each week, to be graded and returned by the teaching assistants. Lab reports are due one week after a lab is completed. Late lab reports will not receive full credit. Your lab TA will explain the penalties for late lab reports.

**LAB SCHEDULE:** (tentative)

<table>
<thead>
<tr>
<th>Date</th>
<th>Experiment</th>
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<tbody>
<tr>
<td>6/1</td>
<td>Safety Lab (Mandatory Attendance)</td>
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<tr>
<td>6/8</td>
<td>Intro to Lab Techniques</td>
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<tr>
<td>6/15</td>
<td>ID of an Unknown Substance</td>
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<tr>
<td>6/22</td>
<td>Reactions in Aqueous Solution</td>
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<tr>
<td>6/29</td>
<td>Cycle of Copper Reactions</td>
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<tr>
<td>7/6</td>
<td>Enthalpy of Neutralization</td>
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<tr>
<td>7/13</td>
<td>Intro to Spectroscopy</td>
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<tr>
<td>7/20</td>
<td>Spectroscopy and Water Hardness</td>
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<tr>
<td>7/27</td>
<td>Isotopes and GC/MS</td>
</tr>
<tr>
<td>8/3</td>
<td>Computational Chemistry</td>
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<tr>
<td>8/10</td>
<td>Synthetic Chemistry (Aspirin)</td>
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**Chemistry Department Policy on Cheating:** Any student caught cheating will be assigned a course grade of “F”. The student’s academic advisor will be notified of this failing grade and the student will not be allowed to drop the course.
Honor Code:
As a UAF student, you are subject to the Honor Code. The university assumes that the integrity of each student and of the student body as a whole will be upheld. Honesty is a primary responsibility of you and every other UAF student. It is your responsibility to help maintain the integrity of the student community.

UAF’s Honor Code is as follows:
1) Students will not collaborate on any quizzes, in-class exams, or take-home exams that will contribute to their grade in a course, unless permission is granted by the instructor of the course. Only those materials permitted by the instructor may be used to assist in quizzes and examinations.
2) Students will not represent the work of others as their own. A student will attribute the source of information not original with himself or herself (direct quotes or paraphrases) in compositions, theses and other reports.
3) No work submitted for one course may be submitted for credit in another course without the explicit approval of both instructors. Violations of the Honor Code will result in a failing grade for the assignment and, ordinarily, for the course in which the violation occurred. Moreover, violation of the Honor Code may result in suspension or expulsion.