CHEM 106X – General Chemistry II, 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 1:00-3:00pm, REIC 202  
Laboratory: W 1:00-4:45pm, REIC 242

REQUIRED MATERIALS:  
OWL access card for Chemistry and Chemical Reactivity 7th Ed (1-semester or 2-semester)  
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: General Chemistry II will cover chapters 12-24. Major subjects include reaction kinetics, equilibrium (including acids and bases, solubility and complex ion formation), nuclear chemistry, electrochemistry, and descriptive chemistry of the elements.

GRADES: The course grade will be based on the total points earned from exams, quizzes, homework, laboratories, and the final exam. These are weighted as follows:  
Exams 40%  
Final Exam 20%  
Homework 20%  
Lab 20%  
TOTAL 100%

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.

EXAMS: There will be four exams plus a final exam. You will be notified at least one week in advance of an exam being given. Typically, an exam will be given after two or three chapters from the text are covered.
**FINAL EXAM:** The final exam will be given during the last class period: Thursday, August 11\(^{th}\) from 1-3pm. 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 106 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 106 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 106 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)

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<thead>
<tr>
<th>Date</th>
<th>Experiment</th>
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<tbody>
<tr>
<td>6/1</td>
<td>Excel and Gas Law Review</td>
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<tr>
<td>6/8</td>
<td>Ten Solutions and Ten Unknowns</td>
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<td>6/15</td>
<td>Silver Plate Photography</td>
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<tr>
<td>6/22</td>
<td>Intro to Kinetics</td>
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<tr>
<td>6/29</td>
<td>Kinetics of Blue Dye Oxidation</td>
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<tr>
<td>7/6</td>
<td>Determination of an Equilibrium Constant</td>
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<td>7/13</td>
<td>Volumetric Analysis and Acid-Base Titrations</td>
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<td>7/20</td>
<td>Hydrolysis of Salts and Behavior of Buffers</td>
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<td>7/27</td>
<td>Thermodynamics and Solubility of Borax</td>
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<td>8/3</td>
<td>Voltaic Cells and Free Energy</td>
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<tr>
<td>8/10</td>
<td>Nuclear Chemistry</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.