CHEM 130 Course Syllabus  
Introductory Chemistry – SPRING 2015 – A. Vieau

Instructor: Arlene Vieau  
Office Hours: M & W 6-6:30, T & Th 11-12:30 in CHEM 126, & during labs as available  
Email: AVieau@occ.cccd.edu  
Phone: (714) 432-5848 (during office hours only)  
Website: http://occonline.occ.cccd.edu/online/avieau (schedule, syllabus, prelabs, worksheets)  
Twitter: twitter.com/CHEM130 (updates)  
Facebook: facebook.com/CHEM130 (updates)  
WebAssign: WebAssign.net (Homework, grades, messaging, updates)  

Lecture: In CHEM 227   MW 6:45-8:10 pm  
Labs: In CHEM 126:  Mon 2:30-5:50  
             Wed 7:50-11 am   Tues 2:30-5:40 pm  
             Thur 7:50-11 am  
             Wed 11:10-2:20  Wed 2:30-5:40

Required Material:  
Text: Introductory Chemistry, A Foundation, Zumdahl & DeCoste  
      PLEASE NOTE: ANY EDITION IS USEABLE, but the chapter numbers are slightly different in earlier editions. If you are using an earlier edition, it is your responsibility to match the chapters with the schedule.  
Supplies: 1-NON-PROGRAMMABLE scientific calculator (with a log function)  
           1-Safety glasses (ANSI Z87.1 approved)  
           5-half page, BLUE scantrons (50 questions on each side)

Grading:  
Attendance: 5%  
Homework: 20%  
Tests: 35%  
Final 20%  
Laboratory 20%  

Approximate Scale:  
≥90% A  
80-89% B  
65-79% C  
50-64% D  
≥49% F

Attendance: It’s important to attend all lectures and to be on time!

Homework: It doesn’t matter how much sense reading your text or listening to lecture makes, if you don’t practice the related problems, you won’t be able to complete the test in a timely manner. The old adage that practice makes perfect certainly applies here!  
- Go to WebAssign.net, click on “I have a class key” and enter: occ.cc.ca 3173 7261 then follow the instructions. This will set up your WebAssign account, which you can use for free for the first 2 weeks of class. You will need to pay for your service to continue using it for the rest of the semester. The cost is $25.95 for a semester access to the homework, or $58.95 for a semesters access to the homework and an electronic copy of the text.  
- Homework assignments will be completed online using the WebAssign website. You must use a computer with internet access to complete them. If you don’t have one, you can use one at the computing center on campus.
Each assignment will have a deadline by which time the assignment must be submitted. Failure to do so will result in a 0 for the assignment. There will be no exceptions, nor extensions, even for technical difficulties. It is important to plan ahead and not wait until the last minute to submit the assignment.

Each assignment will cover an entire chapter. You are advised to do the problems as the chapter is covered, over several days, rather than all at once.

You will be allowed to submit answers for each problem twice, giving you the chance to correct your answers if you make an error. If submitted, the second answer will be graded.

Once the deadline for an assignment has passed, the answer key will be released. Make sure you check your answers and determine what errors you made, if any.

Test & Final:
- Test will cover the chapters indicated on the syllabus, will take the full lecture period they are scheduled for, and will be worth approximately 150 points each.
- Only non-programmable calculators will be allowed during test. You should bring one to every lecture, for use on example problems, to ensure you are comfortable with using it before a test.
- The final will be given over 2 lecture periods & will cover the chapters specified on the schedule. Each half will be worth approximately 150 pts. All equations & constants will be provided for the final only.
- There will be no make-up test or final, no exceptions.
- **USE OF CELL PHONES FOR ANY PURPOSE DURING TEST IS PROHIBITED**, and will result in failure of the test, or course.

Laboratory: Conducting experiments helps you develop the physical skills & techniques that compliment the concepts learned in lecture, while allowing you to “see” the concepts in action.

Your lab grade will consist of:
- Safety quiz: 10%
- Prelab assignment: 10%
- Lab work: 70%
- Technique: 10%

- You will take a safety quiz during the second lab meeting. You must pass the quiz with 17 or more correct answers out of 20 questions. You cannot participate in lab until you have passed the quiz. If you fail the quiz, you will need to retake it (and pass it) before your next lab meeting.
- Prior to each lab, you must print a prelab from the class website, and complete it. You must turn in the completed prelab at the start of lab in order to participate in that experiment. Failure to do so will result in a 0 for both the prelab and the experiment. No late prelabs will be accepted.
- Diligent participation in lab will result in your earning the bulk of the lab work points. Most points are lost because of not paying attention to details or corrections that are made during lab.
- Occasionally worksheets are scheduled for the lab period. Bring these worksheets with you to lecture, as well as the scheduled lab. All worksheets will be collected in lab according to the schedule.
- Ten percent of your lab grade is reserved for you lab technique. An immediate indication of your technique score throughout the semester is how often I have to remind you about how to handle equipment or to use your safety glasses.
- There will be **NO MAKE-UP LABS**. You must attend the lab you are scheduled for.
Lecture Notes: Taking good notes while listening to lecture is an important part of the learning process. To help you do so you should:

- Read the sections of the chapter that are to be covered prior to lecture.
- Download the lecture notes from the class website and bring them to class with you.
- Follow along in your textbook and lecture notes while listening to lecture. Highlight important concepts and supplement them by writing in the margins.
- Work out class problems fully on paper during lecture. When the solutions are discussed, add any missing steps.
- As soon as possible after lecture, review your notes and supplement any missing information. Go over the problems again.
- As soon as possible, do the related homework assignment.
- If you have any questions during lecture, ask them. If you have any questions when going over your notes or working on homework, get them answered as soon as possible (email, office hours...)

Academic Honesty: It is expected that you will earn the grade that you receive by submitting ONLY your work for evaluation.

USE OF CELL PHONES FOR ANY PURPOSE DURING TEST OR LABS IS PROHIBITED.

Any attempt to cheat will not be tolerated. Punishment may include failure of the course without the ability to replace the grade, and a letter being submitted to the students’ permanent academic record.

Student Learning Outcomes: A successful CHEM 130 student will be able to:

1. Use unit equations and simple algebraic methods to solve computational problems in the areas of unit conversion, specific heat, stoichiometry, gas laws, and solution concentrations.
2. Write and balance total ionic and net ionic equations for chemical reactions, including predicting the products of ionic reactions and writing the correct ionic formulas.
3. Apply the principles of electron configurations, Lewis structural theory, and VSEPR theory to predict the structure and three-dimensional shape of simple inorganic and organic species from the chemical formula.
4. Use inorganic nomenclature rules to provide a systematic name for a chemical formula or a chemical formula from a systematic name.
5. Apply safe and proper laboratory techniques to make accurate, reproducible measurements of masses and volumes, and accurate, reproducible experimental observations.

Experience is a harsh teacher...
She gives the test first, THEN teaches you the lesson. -source unknown
<table>
<thead>
<tr>
<th>WEEK</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Lab Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Syllabus, Chp 1</td>
<td>Chp 1, 2</td>
<td>Safety &amp; Lab Techniques</td>
</tr>
<tr>
<td>2</td>
<td>Chp 2, 3</td>
<td>Chp 3, 4</td>
<td>Safety Quiz Worksheets 1-4</td>
</tr>
<tr>
<td>16-Feb</td>
<td>HOLIDAY</td>
<td>Chp 4, 5</td>
<td>Safety Quiz Worksheets 1-4</td>
</tr>
<tr>
<td>4</td>
<td>Chp 5, 6</td>
<td>Chp 5, 7</td>
<td>Exp 1: Metric Measurements</td>
</tr>
<tr>
<td>5</td>
<td>Chp 7</td>
<td>Chp 8</td>
<td>Experiment 2: Density</td>
</tr>
<tr>
<td>6</td>
<td>Chp 8</td>
<td>Chp 9</td>
<td>Experiment 4: Conductivity</td>
</tr>
<tr>
<td>7</td>
<td>Chp 9</td>
<td>Chp 10</td>
<td>Experiment 5: Chemical Reactions</td>
</tr>
<tr>
<td>8</td>
<td>Chp 15</td>
<td>Chp 11</td>
<td>HOLIDAY</td>
</tr>
<tr>
<td>9</td>
<td>Chp 15</td>
<td>Chp 11</td>
<td>Test 2: (Chp 5-9, &amp; 18)</td>
</tr>
<tr>
<td>10</td>
<td>Chp 15, 11</td>
<td>Chp 12</td>
<td>Experiment 7: Density of KI Sol'n</td>
</tr>
<tr>
<td>11</td>
<td>Chp 11/12</td>
<td>Chp 12</td>
<td>Prelab due</td>
</tr>
<tr>
<td>12</td>
<td>Chp 12</td>
<td>Chp 13</td>
<td>Experiment 8: Titrations, Pt I</td>
</tr>
<tr>
<td>13</td>
<td>Chp 13</td>
<td>Chp 13</td>
<td>Prelab due</td>
</tr>
<tr>
<td>14</td>
<td>Chp 14</td>
<td>Chp 14</td>
<td>Experiment 9: Ammonia (Chem GL)</td>
</tr>
<tr>
<td>15</td>
<td>Chp 14</td>
<td>Chp 14</td>
<td>Prelab due</td>
</tr>
<tr>
<td>16</td>
<td>HOLIDAY</td>
<td>Clean up, Check out</td>
<td>Prelab due</td>
</tr>
</tbody>
</table>

*Note: Exp 9 will not be performed this semester

Find lecture notes, prelab material and worksheets at http://occonline.occ.cccd.edu/online/avieau