

## CHEMISTRY 1215 (formerly 1230) -Spring 2006

You are expected to be aware of information contained in the syllabus. The syllabus is also posted on WebCT. The instructor reserves the right not to make a special effort to answer questions already discussed in the syllabus.

**Instructor:** Dr. Laya Kesner, 1319 HEB, 581-6536. Mailbox in 1504 HEB. [kesner@chem.utah.edu](mailto:kesner@chem.utah.edu)

**Office Hours:** **M, W, F 10:00 - 11:30 a. m.** I generally am in the office or lab area from 9:00 to 5:00 with the exception of lectures on MWF 11:50 a.m. -12:40 p.m., T 8:35-11:35 a.m., and H 9:40-11:35 a.m. I can speak with you if there is no situation that demands my immediate attention. During the lunch hour, if present, I am often busy preparing for the afternoon labs.

**Secretary:** Ms. Sue Wolfe, 1320 HEB, 581-5784.

**Teaching Assistants: Mailboxes in HEB 1504.** Office hours arranged at first class meeting.

**Lab Lecture Class Times:**

1215 - 001	H	10:45 - 11:35 a.m.	HEB 2008
1215 - 008	H	9:40 - 10:30 a.m.	HEB 2008

**Lab Section Class Times:** There are **no** morning lab sections. There are lab sections meeting on M, W at 1:25 p. m., T, H at 12:55 p.m., M, T, and H at 4:35 p. m. and W at 6:00 p.m.

**Required Materials:** **General Chemistry Lab I / Student Lab Notebook** is available at the University Bookstore. You should own a **non-programmable scientific calculator** (\$10-20) and be sure you know how to use it. *Programmable calculators or other electronic devices capable of storing large amounts of alphanumeric data may not be used on exams in General Chemistry courses.* **Goggles and a combination lock** should be purchased or may be rented (on the day of check-in) from the Stockroom for \$1 each.

**Notes from the Registrar:**

1. The last day to drop classes (no W) is Wed, Jan 18.
2. The last day to add classes, select C/NC option or to audit a class is Mon, Jan 23.
3. The last day to withdraw from classes is Friday, March 3.

**Note:** The Chemistry Department recommends that pregnant students postpone laboratory courses.

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

**Lab Lecture:** The Chem 1215 lectures are designed to provide you with the theoretical background of the experiments you will be performing in the laboratory. We will also demonstrate the techniques and equipment that you will use in the experiments. Finally, we will advise you on the logistics of each experiment – a safe method of carrying it out efficiently in such a way as to maximize learning. Bringing the lab manual to lecture may be beneficial. The notes for *selected* experiments may appear on WebCT.

**Lecture** Quizzes on the experiment of the previous week are distributed at the end of lecture.  
**Quizzes:** Quizzes are **not** given to latecomers after the first students have finished the quiz and left. There are **no make-up quizzes**. A quiz may be taken **early** from the secretary for a planned, *excused* absence.

### Lab Make-up:

Labs may be made up in regularly scheduled laboratory sections only. If you are unable to attend your lab section one week, it is best to make up the experiment in another section **that same week**. However, materials will remain available the following week if absolutely necessary. For any make up, the TA of the section you attend will **sign a form** (which you must request from Dr. Kesner on the way to lab) to take to **your TA**. The report for a make-up lab will not be accepted without attachment of the signed make-up sheet. It is your responsibility to make all arrangements and to submit the previous lab **on time** (in your own TA's mailbox). Lab make-ups are limited to a maximum of two during the semester. . **One week after the designated week, all experimental materials will be stored; the lab will not be available for make up**. An experiment performed during the make-up week should be completed and submitted to your TA (or in his mailbox) by the end of the make-up week. **A lab report submitted after the make-up week can receive only half credit**. There may be other penalties for late work; be sure you know your TA's policies.

### Preparation for the Laboratory:

1. For your safety, never bring food or beverages into the lab.
2. Always dress correctly. Shorts, miniskirts, crop tops, and sandals are not permitted. If you generally wear shorts and sandals, keep a pair of long pants and closed shoes in your lab locker. Confine long hair.
3. **Eye protection is always required**. You can purchase approved (ANSI Z87.1) safety goggles or glasses at the University bookstore, or you may rent goggles from the Stockroom for \$1/semester.
4. You will also need to bring a combination (**not key**) lock, paper towels, soap, and matches. You may rent a lock from the Stockroom for \$1/semester. You may want to bring a lab coat or apron to protect fashionable clothing.
5. Purchase the laboratory text and the student lab notebook at the University bookstore. You may want to store some additional sheets of graph paper in your lab notebook. **A graph must be plotted on graph paper (or computer generated) to receive credit**.
6. Arrive at the lab on time! **Before** coming to the laboratory, read the experiment carefully, and answer the pre-lab questions. The pre-lab questions should be ready for your TA to collect and grade when you come into the lab. Prepare data tables in which to collect your data in your laboratory notebook.

### During the Laboratory Period and Afterward:

1. **Work individually unless you have been specifically instructed, in the lab lecture, to work in pairs.** Unauthorized collaboration will earn each of the students only partial credit for the experiment.
2. Record data in the table you prepared in your lab notebook. Never use scraps of paper that you are likely to lose. **Before you leave**, make a sample data calculation to be sure that you understand the process, **give the carbon copy of your data to your TA**, and submit any data that your TA is collecting.
3. Prepare your Laboratory Report to submit at the **beginning** of the next laboratory session. Copy all requested data to the Lab Report Sheet in your Lab Manual. Show sample calculations requested on the Report Sheet. Write an approximately four sentence summary of the experiment on the reverse side of the Lab Report. Your experiment will be graded as follows to make the 22 point total:

Prelab - 5 points	Reasonable data and calculations - 10 points
Carbon copy of data - 2 points	Summary - 5 points

Note: The last lab, **Experiment 10**, will be due in the TA's mailbox ***the day following the laboratory period***. The Monday, April 17, 1:25 p.m. lab will be the only additional make-up time for Experiment 10; an experiment made up on Mon., April 17 must be written up immediately and submitted. **No lab reports will be accepted after 5:00 p.m. on Monday, April 17.**

### Course Grading:

Best 9 quizzes @ 10 points each (The <i>optional</i> final exam can be used to substitute for two low or absent quiz grades.)	=	90
Ten experiments @ 22 points each (There may be normalization between sections of experiment points.)	=	220
Lab check-out	=	5
Total		----- 315

Grading will be on a modified percentage basis.	Academic dishonesty will be dealt with severely and may result in failure for the course.
90 - 100 - A-, A	
80 - 89 - B-, B, B+	
70 - 79 - C-, C, C+	
60 - 69 - D-, D, D+, C-	

**YOU MUST COMPLETE THE LABORATORY WORK AND SUBMIT THE REPORT FOR AT LEAST EIGHT OF THE TEN EXPERIMENTS IN ORDER TO PASS. NO MATTER WHAT YOUR POINT TOTAL IS, YOU CANNOT PASS THE COURSE IF YOU MISS MORE THAN TWO EXPERIMENTS.**

**Order of the Experiments:**

The 1215 laboratory manual is printed only once a year. Because the current 1210 text differs from the text used in Fall 2005, the experiments will be carried out in the following order:

Week of	Expt.	Book Number	Page	Title
1/23/06	1	1	16	Density of a Metal Object and a Salt Solution
1/30/06	2	2	25	Quantitative Analysis of a Hydrate
2/06/06	3	10	81	Paper Chromatography of Plant Pigments
2/13/06	4	3	31	Determining the Percentage of Acetylsalicylic Acid (ASA) in Aspirin Tablets Using Acid-Base Titration
2/27/06	5	4	39	Redox Titration: The Oxidizing Capacity of Bleach
3/06/06	6	8	67	Analysis of a $\text{KClO}_3$ Mixture and the Determination of the Molar Volume of Oxygen Gas
3/20/06	7	5	45	Hess' Law and the First Law of Thermodynamics
3/27/06	8	6	53	Measurement of the Concentration of Copper in an Unknown Solution
4/03/06	9	9	75	The Vapor Pressure of Water and Water's Enthalpy of Vaporization
4/10/06	10	8	61	Enthalpy Change for the Decomposition of Hydrogen Peroxide

## Schedule for Chem 1215 - Spring 2006

Week of	Monday	Tuesday	Wednesday	Thursday	Friday
January 9	<b>1/9</b> No lab	<b>1/10</b> No lab	<b>1/11</b> No lab	<b>1/12</b> Lecture: Intro Quiz: None No lab	<b>1/13</b> No lab
January 16	<b>1/16 MLK - HUMAN RIGHTS DAY HOLIDAY</b>	<b>1/17</b> No lab	<b>1/18</b> No lab	<b>1/19</b> Lecture: Expt 1 Quiz: None No lab	<b>1/20</b> No lab
January 23	<b>1/23</b> Lab check-in Lab: Experiment 1	<b>1/24</b> Lab check-in Lab: Experiment 1	<b>1/25</b> Lab check-in Lab: Experiment 1	<b>1/26</b> Lecture: Expt 2 Quiz: None Lab check-in Lab: Experiment 1	<b>1/27</b> Lab check-in Lab: Experiment 1
January 30	<b>1/30</b> Lab: Experiment 2 Make-up: Expt.1	<b>1/31</b> Lab: Experiment 2 Make-up: Expt.1	<b>2/1</b> Lab: Experiment 2 Make-up: Expt.1	<b>2/2</b> Lecture: Expt. 3 Quiz: Expt. 1 Lab: Experiment 2 Make-up: Expt.1	<b>2/3</b> Lab: Experiment 2 Make-up: Expt.1
February 6	<b>2/6</b> Lab: Experiment 3 Make-up: Expt. 2	<b>2/7</b> Lab: Experiment 3 Make-up: Expt. 2	<b>2/8</b> Lab: Experiment 3 Make-up: Expt. 2	<b>2/9</b> Lecture: Expt. 4 Quiz: Expt. 2 Lab: Experiment 3 Make-up: Expt. 2	<b>2/10</b> Lab: Experiment 3 Make-up: Expt. 2
February 13	<b>2/13</b> Lab: Experiment 4 Make-up: Expt. 3	<b>2/14 ♥</b> Lab: Experiment 4 Make-up: Expt. 3	<b>2/15</b> Lab: Experiment 4 Make-up: Expt. 3	<b>2/16</b> Lecture: Expt.5 Quiz: Expt. 3 Lab: Experiment 4 Make-up: Expt. 3	<b>2/17</b> Lab: Experiment 4 Make-up: Expt. 3
February 20	<b>2/20 PRESIDENT'S DAY HOLIDAY</b> No lab	<b>2/21</b> No lab	<b>2/22</b> No lab	<b>2/23</b> Lecture: None Quiz: None No lab	<b>2/24</b> No lab

February 27	<b>2/27</b>  Lab: Experiment 5 Make-up: Expt. 4	<b>2/28</b>  Lab: Experiment 5 Make-up: Expt. 4	<b>3/1</b>  Lab: Experiment 5 Make-up: Expt. 4	<b>3/2</b> Lecture: Expt.6 Quiz: Expt. 4  Lab: Experiment 5 Make-up: Expt. 4	<b>3/3</b> Last day to withdraw (W)  Lab: Experiment 5 Make-up: Expt. 4
March 6	<b>3/6</b>  Lab: Experiment 6 Make-up: Expt. 5	<b>3/7</b>  Lab: Experiment 6 Make-up: Expt. 5	<b>3/8</b>  Lab: Experiment 6 Make-up: Expt. 5	<b>3/9</b> Lecture: Expt.7 Quiz: Expt. 5  Lab: Experiment 6 Make-up: Expt. 5	<b>3/10</b>  Lab: Experiment 6 Make-up: Expt. 5
March 13	<b>3/13</b> <b>SPRING BREAK</b>	<b>3/14</b> <b>SPRING BREAK</b>	<b>3/15</b> <b>SPRING BREAK</b>	<b>3/16</b> <b>SPRING BREAK</b>	<b>3/17</b> <b>SPRING BREAK</b>
March 20	<b>3/20</b>  Lab: Experiment 7 Make-up: Expt. 6	<b>3/21</b>  Lab: Experiment 7 Make-up: Expt. 6	<b>3/22</b>  Lab: Experiment 7 Make-up: Expt. 6	<b>3/23</b> Lecture: Expt.8 Quiz: Expt. 6  Lab: Experiment 7 Make-up: Expt. 6	<b>3/24</b>  Lab: Experiment 7 Make-up: Expt. 6
March 27	<b>3/27</b>  Lab: Experiment 8 Make-up: Expt. 7	<b>3/28</b>  Lab: Experiment 8 Make-up: Expt. 7	<b>3/29</b>  Lab: Experiment 8 Make-up: Expt. 7	<b>3/30</b> Lecture: Expt. 9 Quiz: Expt. 7  Lab: Experiment 8 Make-up: Expt. 7	<b>3/31</b>  Lab: Experiment 8 Make-up: Expt. 7
April 3	<b>4/3</b>  Lab: Experiment 9 Make-up: Expt. 8	<b>4/4</b>  Lab: Experiment 9 Make-up: Expt. 8	<b>4/5</b>  Lab: Experiment 9 Make-up: Expt. 8	<b>4/6</b> Lecture: Expt. 10 Quiz: Expt. 8  Lab: Experiment 9 Make-up: Expt. 8	<b>4/7</b>  Lab: Experiment 9 Make-up: Expt. 8
April 10	<b>4/10</b>  Lab: Experiment 10 Make-up: Exp. 9 Lab check-out	<b>4/11</b>  Lab: Experiment 10 Make-up: Expt. 9 Lab check-out	<b>4/12</b>  Lab: Experiment 10 Make-up: Expt. 9 Lab check-out	<b>4/13</b> Lecture: None <b>Quiz: Expt. 9</b> Lab: Experiment 10 Make-up: Expt. 9 Lab check-out	<b>4/14</b>  Lab: Experiment 10 Make-up: Expt. 9 Lab check-out
April 17	<b>4/17 Last day for submitting expts !!</b>  Make-up: Expt.10 (1:25 p.m. only)	<b>4/18</b>  No lab or make-up	<b>4/19</b>  No lab or make-up	<b>4/20</b> Lecture: None <b>Quiz: Expt. 10</b> <b>Optional Final</b>  No lab or make-up	<b>4/21</b>  No lab or make-up