

Chemistry 1221 – General Chemistry II – Spring 2013

Instructor: Dr. Thomas G. Richmond, HEB 2404, 801-581-7487, T.Richmond@utah.edu
Office Hours: MW, 12:00 – 1:00 PM or stop by anytime.

Secretary: Stephanie Thompson, HEB 2040, 801-585-7896, Thompson@chem.utah.edu

Class Meets: MTWHF, 8:35 AM - 9:25 AM, FASB 295

FINAL: **Comprehensive ACS General Chemistry Exam, Tuesday, April 30, 8:00 – 10:00 AM
No Early, Late, or Make-up Exams or “Extra Credit.”**

Text: Zumdahl², *Chemistry: An Atoms First Approach* & OWL (Web Based Homework)

This is an Honors Section second semester class in General Chemistry for Science Majors. Students must be members of the Honors College and apply to the instructor for admission to this course. The laboratory course CHEM 1241, Honors General Chemistry Laboratory II, is a co-requisite. General Chemistry I is a pre-requisite.

We will cover chapters 11 - 22 of the text using the topics in Chapter 10 as a springboard for our discussion. I will assume that you *already know* the names and symbols of the first 36 elements, the names, formulas and charges for common cations & anions (Tables 3.3 & 3.4), common polyatomic ions (Table 3.5) and can identify the diatomic elements (N₂, O₂, F₂, Cl₂, Br₂, I₂). If this is not the case, please memorize this information now. You should learn the meaning and application of the SI Prefixes (M→η) in Table R.2. You will need a scientific calculator capable of log/exponential functions and scientific notation for this course. You may NOT use a more sophisticated device capable of storing alphanumeric data or special equation solving capability. Buy (~\$12) or otherwise obtain an appropriate calculator now and learn how to use it! It is wise to read the assigned chapter prior to attending class. Some class time will be devoted to problem solving in both lecture and discussion sections.

The Final Grade in this course will be based on total points earned:

Exam 1 (Chapter 10)	January 15	60
Computer Based Exams (C1, C2, C3)	60 points each	180
Three in Class Exams (E2, E3, E4)	60 points each	180
Low Exam Score will be Dropped		-60
OWL Homework	Top 10 of 12 Scores	100
Written Assignments	Two 20 point 1-page papers	40
Final Exam (ACS General Chemistry Exam)	Highest of %right or %tile	100
Total Possible Points		600

The dates for the computer based exams will be arranged in class. The lowest of the seven exam scores will be dropped. Each OWL assignment will be normalized to 10 points. Two short written assignments will allow you to reflect on how chemistry is important to your world and the world at large.

Grades will be assigned based on my professional judgment of the overall performance of each student using the above point distribution. Any requests for re-grades must be turned into Professor Richmond the same week the exam is returned; TAs are great sources of advice but cannot award additional points on exams.

Please consult with the Center for Disability Services, Room 162, Olpin Union (801-581-5020) to arrange for any special accommodations required to meet the expectations of this course.

All students will be subject to the University of Utah Student Code. (<http://www.sa.utah.edu/code/>)

This is a tentative plan for the class but is subject to change. Alterations will be announced in class and on CANVAS.

You have all chosen to be here for various academic and professional reasons. My promise to you is that this will be a stimulating and challenging course and your hard work will pay off in enhanced problem solving ability and increased understanding of the world around you from a chemical perspective. I hope you will enjoy your study of chemistry – the central science.

CHEMISTRY 1211 – Fall 2013 – Tentative Course Schedule

JAN 7		Course Overview and Philosophy
8		10: Chemical Reactions and Solution Stoichiometry
9		
10		
11		
14		11: Properties of Solutions
15	Exam 1	Chapter 10
16		
17		
18		
21	No Lecture	MLK Day
22		
23		12: Chemical Kinetics
24		
25		
28		
29		
30		
31		13: Chemical Equilibrium
FEB 1		
4		
5		
6		
7		14: Acids and Bases
8		
11		
12	Exam 2	Chapters 11, 12 & 13
13		
14		
15		
18	No Lecture	Presidents' Day
19		
20		15: Acid-Base Equilibria
21		
22		
25		
26		
27		
28		
29		March 1 is the last day to withdraw(W)

MAR		16: Solubility and Complex Ion Equilibria
4		
5		
6		
7		
8		
11		Spring Break
12		Spring Break
13		Spring Break
14		Spring Break
15		Spring Break
18		17: Spontaneity, Entropy, and Free Energy
19		
20		
21		
22		
25		18: Electrochemistry
26	Exam 3	Chapters 15, 16 & 17
27		
28		
29		
April		19: The Nucleus: A Chemist's View
1		
2		
3		
4		
5		
8		20: The Representative Elements
9		
10		
11		
12		
15		21: The Transition Metals: A Survey
16		
17		
18		
19		
22		22: Organic and Biological Molecules
23	Exam 4	Chapters 18, 19, 20 & 21
24		
25		
26		
30	Final Exam	Comprehensive, 8:00 AM – 10:00 AM