Lecture Syllabus for Chem 112 Spring 2007
Section 002, MP 201, MW 6:00-7:15pm

Instructor: Sean Ruettgers

Office hours: M, W 5pm-6pm. I am generally available M-F *by appointment* as well.
Office location: SN-335 (chemistry computer lab)
Email: seanruettgers@boisestate.edu
Phone: 426-1079

Pre- and Corequisites

Prerequisite: C111 and C111 lab
Co requisite: C112 lab

Chemistry 101 Core Learning Objectives for Students

Improve Your Critical Thinking/Problem Solving

- Recognize and solve chemistry problems using both qualitative/conceptual and quantitative/computational methods
- Construct arguments to support and explain specific characteristics and consequences of various chemical processes
- Identify, use, and articulate an understanding of information derived from both written and spoken sources
- Develop the ability to influence others, build trust, maximize working relationships, and to communicate scientific information effectively

Mold Your Cultural Perspective

- Apply fundamental principles learned in the lecture and laboratory to understand chemical phenomena observed in the laboratory as well as every day life
- Recognize & understand some of the societal implications involving chemistry and science in order to create an informed opinion on 21st century issues

Gain Breadth of Knowledge and Intellectual Perspective

- Gain an awareness and understanding of the basic principals and methods used in the field of chemistry
- Demonstrate proficiency in the fundamentals of chemistry as measured by assessments described below

Required Materials

- Text: Chemistry (9th Edition). Chang; ISBN 0073221031; McGraw Hill (2007)
- Calculator: capable of scientific notation and logarithms
- Computer and internet access to the Boise State University Blackboard site is also required. Students are expected to check their BSU email and the Blackboard site regularly.

Optional Materials

- Chemistry Study Guide and Solutions Manual (9th Edition). Chang; ISBN 007298613; McGraw Hill (2007)

Assessment of student performance

The following assessments will be used to determine your final grade:

To receive an "A" for the course, you must:

- Complete all four mid term exams **and** the final exam with a score of 70% or higher
- Score a total average of 70% or higher on all in-class assignments and quizzes
- Satisfactorily complete a group presentation on a chemistry topic (topic to be determined separately)
- Satisfactorily complete a paper on a chemist of historical significance.
- Satisfactorily complete the lab component.

To receive a "B" for the course, you must:

- Complete three of four mid term exams **and** the final exam with a score of 70% or higher
- Score a total average of 70% or higher on all in-class assignments and quizzes
- Satisfactorily complete a group presentation on a chemistry topic (topic to be determined separately), **-or-** Satisfactorily complete a paper on a chemist of historical significance.
- Satisfactorily complete the lab component.

To receive a "C" for the course, you must:

- Complete three of four mid term exams **and** the final exam with a score of 70% or higher
- Score a total average of 70% or higher on all in-class assignments and quizzes
- Satisfactorily complete the lab component.

To receive a "D" for the course, you must:

- Complete two of four mid term exams **and** the final exam with a score of 70% or higher
- Score a total average of 70% or higher on all in-class assignments and quizzes
- Satisfactorily complete the lab component.

You will receive an "F" for the course if you do not complete one of the above-mentioned menus.

University policy requires utilizing a "plus-minus" grading system. For this course, a "+/-" will be assigned to **your** final grade ***based on your attendance*** as follows:

- Miss 0 or 1 class: + (plus) assigned to final grade
- Miss 2-3 classes: no change to final grade
- Miss 4 or more clases: - (minus) assigned to final grade

Student Conduct

- Please note that your cell phone should be in silent mode during class; do all your cell phone messaging (verbal, text, etc.) outside the classroom.

- The Student Code of Conduct is taken seriously in this course. In case you've never read the Student Code of Conduct, please go to http://www2.boisestate.edu/studentconduct/Student%20Code%20of%20Conduct.htm#3.1. The section of particular interest in this course is section 1, which states "Cheating or plagiarism in any form is unacceptable. The University functions to promote the cognitive and psychosocial development of all students. Therefore, all work submitted by a student must represent her/his own ideas, concepts, and current understanding. Academic dishonesty also includes submitting substantial portions of the same academic course work to more than one course for credit without prior permission of the instructor(s)."

Class Structure

- This class is primarily lecture-based interspersed with in-class problem-solving sessions and quizzes.
- In-class practice problems will be assigned periodically. These practice sessions will be ***group based***. All employers and institutions in the 21st Century seek employees that demonstrate the ability to build trust, communicate effectively, and maximize working relationships, and in this class we will seek to exercise those skills.
- Homework problems from the end of each chapter are highly recommended. These problems will not be handed in but are excellent resources in preparing for exams.
- Periodically, a quiz will be assigned. Quizzes are due as assigned by the instructor.
- To get the greatest benefit from this class structure you need to come to class prepared. Study the material we have covered in lecture and the homework problem set you are working on before the next class, so that you know the particular areas where you need assistance.
- Exams will all be **cumulative** and **comprehensive**, covering all of the material up to and including the material covered on the class prior to the exam. All exams with the exception of the final exam are take home, "open book/open note" exams.

The Blackboard Course Site

This course has an on-line component serviced by Blackboard (Bb). The Bb course site will be used to post announcements, grades, course documents, etc. It is recommended that you access this site regularly.

If you were pre-registered for this course, you have already been enrolled in the Bb version of the course. If you registered later, provide your instructor with your name and student ID #, so you can be added to the course.

You can get to the Bb site for the course by pointing your browser to http://blackboard.boisestate.edu. Your username for your Bb account is your 9-digit BSU ID number. Initially, your password is also your ID number. The first time you login, you should change your password. If you have taken a previous course with Bb, your last password is still valid.

For instructions on changing your password, go to http://itc.boisestate.edu/BbSupport/BbFaq/

Other Resources

The C112 tutor schedule at the Gateway Center will be published soon. See http://tutoring.boisestate.edu/ for details on exact schedule.

Group Presentations and Chemist of Historical Significance Paper

Those students pursuing an "A" or "B" grade in the course are required to satisfactorily complete a presentation on a chemistry topic and/or to complete a paper on a chemist of historical significance. Appropriate credit citations of material used on these assignments is required!

A separate handout on these two assignments will be issued during the first part of the semester to those students pursuing an "A" or "B" in the class.

Group presentations are separate from the in-class problem solving groups.

C112 Tentative Course Schedule Spring 2007

Week of:	Chang Chapter	Chapter progression	Approximate Examination Schedule
Jan **15**, 17	**(no class 1/15)** Intro to class		
Jan 22, 17	23 Nuclear Chemistry	23	1/22 Grade contract due
Jan 29, 31	11 Intermolecular Forces	11	1/31 Exam #1 issued
Feb 5, 7	12 Physical Properties of Solutions	12	2/5 Exam #1 due
Feb 12, 14	13 Kinetics	13	
Feb **19**, 21	**(no class 2/19)** 13 Kinetics	13	2/21 Exam #2 issued
Feb 26, 28	14 Chemical Equilibrium	14	2/26 Exam #2 due
Mar 5, 7	14 Chemical Equilibrium, 15 Acids and Bases	14, 15	
Mar 12, 14	15 Acids and Bases	15	3/14 Exam #3 issued
Mar 19, 21	16 Acid-Base Equilibria	16	3/19 Exam #3 due
Mar 26, 28	**(spring break no class)**		
Apr 2, 4	16 Acid-Base Equilibria , 18 Entropy, Free Energy	16, 18	
Apr 9, 11	18 Entropy, Free Energy	18	
Apr 16, 18	19 Electrochemistry	19	4/18 Exam #4 issued
Apr 23, 25	19 Electrochemistry, 24 Organic Chemistry	19, 24	4/23 Exam #4 due
Apr 30, May 1	24 Organic Chemistry	24	
May 7	**Final Examination 6:00pm – 8:00pm**		