

Chem. 111 General Chemistry
Spring 2007
Section 001
MWF 10:40 – 11:30, MP207

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Office Hours: T 11AM - 12 PM

Text: Chang, Raymond, "Chemistry", McGraw-Hill, 9th ed., 2007

Introduction

Chemistry 111 is the first semester course of a two semester sequence. The course is designed to prepare students for more advanced courses in chemistry and science. Chemistry 111 can often be a difficult subject for many students. Studies have shown that there is a correlation between the success rate of students in introductory chemistry courses and a student's mathematical skills. Since much of the chemistry taught in this course is based on math, if you have difficulty with algebraic manipulations you will need to put in extra time to understand the math and the chemistry. The course will also require that you learn essential vocabulary and terms. Understanding the basic vocabulary used by chemists is essential for understanding the material and solving scientific problems. Therefore, you will be required to memorize some material (i.e. metric prefixes, names and symbols of common elements, etc.) throughout the course. Material to be memorized will be announced in class and on Blackboard.

Exams

There will be four midterm exams (each 100 pts) and a two-hour cumulative final exam (200 pts). See the schedule for the examination dates and times. *Each student may drop one midterm exam. The final exam score cannot be dropped.* The best three midterm exams will count for 35% of the final grade while the final exam will count for 25%. Exams will consist of multiple choice and short answers. Each exam will cover material from the book, topics covered in class, in-class assignments and the homework sets. Even though each exam will cover new material, previous material may be included. **No make-up exams will be allowed.**

Students *must* have a calculator for homework and exams capable of performing square roots, logarithms, exponentiation and scientific notation operations. **Calculators that display text are forbidden on exams.** The instructor may examine your calculator before or during your exam. Any violation will be subject to the Scholastic Dishonesty Policy discussed below.

Problem Sets

On-line problem sets will be assigned for each chapter (total of ten problem sets over the semester) on Blackboard (Bb). Each problem set will typically consist of *ten* multiple choice questions. Due dates will be announced in class and posted on Bb. Problem sets completed after the due date will receive a grade of zero. Students may complete the assignments from any computer with an internet connection. The hours for the Chemistry Computer Center are 8-5 M-F.

Additional practice problems for each chapter will also be posted on Bb for your benefit (Chapters 1-2 are listed below in the Course Content Section). These are provided to help you master the material but will not be collected or graded. Completing the practice problems is the best way to ensure that you understand the material. The ability to solve scientific problems effectively requires practice, practice and practice. If you find that you do not understand a problem, get help. **Do not use the graded on-line problem sets as a substitute to the assigned problems at the end of the chapter. If the only problems you do are the graded on-line problem sets, then you will be unprepared for the exams.**

In-Class Group Exercises

A minimum of fifteen group exercises will be used throughout the semester. Each exercise will be worth 5 points and the best fifteen group exercises will be used towards your total 75 points. Points will be awarded for both effort and appropriate answers. The exercises are intended to increase student engagement and learning by teaching and learning from others. Participation by every member of the group is required. Lack of participation by a member will result in a grade of zero for that exercise and will be counted as one of the fifteen exercises used to determine your total points.

Grading

The lecture score will be weighted 80 % and the laboratory score will be weighted 20 %.

Homework Assignments	10 %
In-Class Group Exercises	10 %
Midterm Exams	35 %
Final	25 %
Laboratory	20 %

No make-up exams will be allowed. If a midterm exam is missed, then that exam will count as your one dropped exam. **No early or late finals will be given.** Final grades will be assigned according to the following scale:

94-100%, A; 90-93%, A-; 87-89%, B+; 83-86%, B; 80-82%, B-; 77-79%, C+; 73-76%, C; 70-72, C-; 67-69:, D+; 63-66%, D; 60-62%, D-; <59, F.

Laboratory

The laboratory portion of the course grade will be determined according to the syllabus for the laboratory course. Missing more than *one* laboratory will result in the failure of the course.

Incomplete

An incomplete grade will only be given to students who were prevented from completing the required work or missed the final exam due to extraordinary circumstances. Extraordinary circumstances are hospitalizations, car accidents and major illnesses. The extraordinary circumstances must be verified. Awarding an incomplete grade will require a written agreement between the instructor and student describing the terms for completing the course requirements. Any student assigned an incomplete grade is required to complete the course requirements, as discussed in the written agreement, within one year.

Scholastic Dishonesty Policy

Scholastic dishonesty is any conduct described as follows from the “Student Code of Conduct”: “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).” Failure to adhere to this code will result in the student receiving a grade of zero for the work involved. Further clarification can be found at <http://www2.boisestate.edu/studentconduct/>.

Attendance

Attendance is not mandatory but frequent in-class group exercises will be assigned during lecture throughout the semester (see above). No make-up group exercises will be allowed.

Student Conduct

The Student Conduct Code states that students are required to behave in a manner that does not disrupt student learning or the instructor’s ability to teach. Further information regarding the Student Conduct Code can be found at <http://www2.boisestate.edu/studentconduct/>. If an instructor considers a student’s conduct disruptive, the student will be asked to leave class.

Students with Disabilities

Accommodations are available for students with disabilities and special needs. Students should contact their instructor and the Office of Disability Services (Admin 114, 426-1583) to discuss their needs and to register for services. Students are required to provide documentation of their disability and meet with a Disability Specialist prior to receiving accommodations. Information about a disability or health condition will be regarded as confidential.

Blackboard

Blackboard will be used for on-line problem sets and to post announcements and course notes. If you have pre-registered for the course, you will be automatically enrolled into the Bb course. If you registered late, you will need to provide me your name and student ID #, so that you can be added to the course.

You can access the Bb site for the course at <http://blackboard.boisestate.edu>. Due to the recent upgrade to Blackboard v.7, your old Bb username and password will no longer work. Use your BroncoWeb username and password to login. If you don’t know what your BroncoWeb information is, contact the BroncoWeb Helpline at (208) 426-2932.

Tutoring

Besides the instructor’s office hour, free tutoring is often available at the Gateway Center. Information, such as times and locations, can be viewed at <http://tutoring.boisestate.edu/>.

Course Content

Below is a tentative schedule of the chapters that will be covered. Please note that this is a tentative schedule so changes may occur throughout the course. Updates will be posted on Bb.

Su	Monday	Tu	Wednesday	Th	Friday	Sa
	Jan 15	16	17 <i>Class Begins Intro, Chapter 1</i>	18	19 <i>Chapter 1</i>	20
21	22 <i>Chapter 1</i>	23	24 <i>Chapter 1</i>	25	26 <i>Chapter 1-2</i>	27
28	29 <i>Chapter 2</i>	30	31 <i>Chapter 2</i>	Feb 1	2 <i>Chapter 2</i>	3
4	5 <i>Chapter 3</i>	6	7 EXAM 1 (Ch 1-2)	8	9 <i>Chapter 3</i>	10
11	12 <i>Chapter 3</i>	13	14 <i>Chapter 3-4</i>	15	16 <i>Chapter 4</i>	17
18	19 Holiday No Class	20	21 <i>Chapter 4</i>	22	23 <i>Chapter 4</i>	24
25	26 <i>Chapter 4-5</i>	27	28 <i>Chapter 5</i>	Mar 1	2 <i>Chapter 5</i>	3
4	5 <i>Chapter 5</i>	6	7 <i>Chapter 5-6</i>	8	9 EXAM 2 (Ch 3-5)	10
11	12 <i>Chapter 6</i>	13	14 <i>Chapter 6</i>	15	16 <i>Chapter 6</i>	17
18	19 <i>Chapter 6-7</i>	20	21 <i>Chapter 7</i>	22	23 <i>Chapter 7</i>	24
25	26 Spring Break	27	28 Spring Break	29	30 Spring Break	31
Apr 1	2 <i>Chapter 7</i>	3	4 <i>Chapter 7-8</i>	5	6 EXAM 3 (Ch 6-7)	7
8	9 <i>Chapter 8</i>	10	11 <i>Chapter 8</i>	12	13 <i>Chapter 8-9</i>	14
15	16 <i>Chapter 9</i>	17	18 <i>Chapter 9</i>	19	20 <i>Chapter 9</i>	21
22	23 <i>Chapter 9-10</i>	24	25 EXAM 4 (Ch 8-9)	26	27 <i>Chapter 10</i>	28
29	30 <i>Chapter 10</i>	May 1	2 <i>Chapter 10</i>	3	4 <i>Chapter 10 & Review</i>	5
6	7	8	9 FINAL EXAM 10:30 AM-12:30 PM	10	11	12

Practice Problems for Chapters 1-2:

Chapter 1: 1.1, 2, 9, 11-16, 21, 22, 25, 30-36, 38, 39, 42, 45, 48, 54, 69, 76, 79, 85

Chapter 2: 2.6, 8, 10-21, 24, 27-28, 30-33, 35-36, 38, 43, 45, 47, 49-50, 57-60, 62, 63, 65, 68, 71-73, 89-90.

Learning Outcomes

Chemistry 111 addresses the core goals outlined in the Boise State University Core Curriculum guideline. Upon completion of this course, a student will be able to ...

Critical Thinking/Problem Solving Skills:

- clearly identify and analyze a problem; determine what information is needed for a solution; identify and execute possible solutions
- draw conclusions from data based on analysis and interpretation; identify any necessary assumptions.

Communication Skills:

- describe one's methodology and scientific results in writing using clear, concise language.
- articulate a claim and provide a clearly-written evidence-based argument for its validity.
- employ speaking, listening, & interpersonal communication skills within your classroom groups to both teach and learn from others.

Breadth of Knowledge and Intellectual Prospective:

- describe and apply major chemical concepts and theoretical principles appropriate to the introductory level of material in the course.
- articulate an understanding of the particulate nature of matter ("thinking" on the level of atoms and molecules) and the connection(s) between molecular level explanations and macroscopic (real-life) observables.
- apply the scientific method to a problem using hypothesis-driven methods of scientific inquiry.