

CHEM113 B
General Chemistry I
Fall 2006
Office Hours: M/T/W 11:15am–12:15

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Course Information:

- Lectures on M/W/F, 10:20-11:10am, in Collier 204 (Dana Lecture Hall)
- Problem Session on Tuesday at either 7:50-8:40a or 9:10-10a in Collier 202
- Laboratory on either T, W, R or F 12:45-3:45pm, in Collier 210 (separate lab syllabus)

Course Materials:

- Required text: “Chemistry: The Central Science, 10th ed.” by Brown/LeMay/Bursten/Burdge ISBN#0-13-146489-2
- Optional manual: “Solutions to Exercises, 10th ed.” by Wilson (ISBN#0-13-146491-4)
- Black Board Site: At <http://blackboard.moravian.edu/> you can enroll in the course page for CHEM113B. Throughout the semester important announcements, assigned problems for quizzes, answer keys for quizzes, lecture documents, and pertinent links will be posted. Please access this early and often!
- Highly recommended companion website for several editions of the required text can be found at <http://www.prenhall.com/brown/index2.html>

Course Description:

This is the first semester of a traditional two-semester introductory chemistry sequence that can count toward majors in the sciences as well as fulfill the LinC sciences requirement with laboratory (F4). In General Chemistry I students will be introduced to the fundamental principles of chemistry as a quantitative science including inorganic reactions, thermochemistry, atomic theory and structure, and properties of gases, liquids and solids. Some prior familiarity with basic material from High School Chemistry is helpful, although prior in-depth knowledge of topics is not expected.

Course Expectations:

Expectations of students completing this course include (but are not limited to) the following:

- Naming simple inorganic salts and simple inorganic compounds (going from name to formula, and from formula to name)
- Solving basic stoichiometric problems involving weight, solutions, and gases in any combinations
- Writing balanced chemical equations for simple reactions, including net ionic equations for reactions in aqueous solution
- Understanding the atomic nature of matter including the components of the atom and the modern theories of their arrangement in the atom
- Understanding the properties of atoms and explaining these properties in terms of atomic interactions
- Understanding the basic heat transformations in chemical systems
- Drawing Lewis structures for simple inorganic molecules from a chemical formula and predicting the 3D geometry and hybridization around an atom

- Understanding the bulk properties of matter and the intermolecular reactions that lead to these properties

Attendance Policy:

Your presence is welcome and expected in all course meetings (class, problem sessions, and laboratories). As a reminder, the college policy on attendance can be found at <http://www.moravian.edu/studentLife/handbook/academic.htm>. If you anticipate an unavoidable absence (due to an extenuating circumstance that is documented by an academic dean or health professional), please notify the instructor as soon as possible. You are responsible for providing documentation and making arrangements in a timely manner or else a grade of zero will be assigned for missed work. Arrangements for laboratory make-up should be made with the laboratory coordinator Dr. David Langhus (Collier HOSCI 225, x1434, email: langhus@cs.moravian.edu).

Academic Honesty Policy:

Please be familiar with the college policy on academic honesty that applies to this course (<http://www.moravian.edu/studentLife/handbook/academic2.htm>). In addition, throughout this course, each student may exchange experimental details and data with her/his lab partner and classmates. However, any work submitted in your name is to be your work alone. You may discuss work with others on assignments and labs, but merely copying answers is not acceptable.

Grading:

Your grade in this course does not depend on the grade of any other student in the class. Instead, your letter grade will be determined by the percentage of total possible points you earn in this course, according to the following scale:

Percentage-Based Grading Scale

Percentile	Letter Grade	Percentile	Letter Grade
93-100	A	73-76	C
90-92	A-	70-72	C-
87-89	B+	67-69	D+
83-86	B	63-66	D
80-82	B-	60-62	D-
77-79	C+	< 60	F

The total number of possible points in this course is *anticipated* to be as follows:

I.	Exams (4@135pts each)	540pts
II.	Optional Quizzes (8@17pts each)	
III.	Problem Sessions	60pts
III.	Final Exam	200pts
IV.	Laboratory	200pts
	<u>Total for Course</u>	<u>1000pts</u>

I. Exams: Four 50-minute exams will be given during the semester. These exams will be administered during lecture time on September 20th, October 13th, November 8th, and November 29th. There will be no exceptions on exam times and NO MAKEUP EXAMS ARE GIVEN.

II. Quizzes: Weekly quizzes are designed to impact your grade positively or not at all. These quizzes will be based on the assigned homework problems (posted weekly to the course Blackboard Site) for which complete solutions are available in the solutions

manual for the required text (on sale at bookstore). At the end of the semester, if your total quiz score is higher than your lowest exam score, then the low exam score will be replaced by the higher quiz score when calculating your final course grade. This means that if you consistently perform well on weekly quizzes, you can drop a single poor semester exam grade (excluding the final exam).

III. Problem Sessions: Problem session times for this section will be used for group-based learning activities (6% of your semester grade), exam reviews, and possibly for quizzes and makeup lectures as necessary. Absences will be noted and are likely to negatively affect your course performance.

IV. Final Exam: This exam will be cumulative and given at a time designated by the Registrar. The college policy on final exams can be found at <http://www.moravian.edu/studentLife/handbook/academic.htm>.

V. Laboratory: Details are provided in a separate laboratory syllabus.

Getting Course Help:

If you are having difficulties, don't wait to get help! You can....

- Stop by the instructor's office during office hours with questions
- Attend general chemistry group review sessions (for either course section!)
- Contact your instructor by email or phone to make an appointment for review
- Request a peer tutor at Learning Services (office phone: 610-861-1510, 1307 Main St)

Tentative Reading/Lecture/Problem-Session Schedule:

Week of...	Chapter(s)	Lecture Topic(s)	Problem Session
8/28	1	Matter and Measurement	Math Skills
9/6	2	Atoms, Molecules, and Ions	POGIL #1
9/11	3	Stoichiometry	POGIL #2
9/18	4	Aqueous Reactions	Exam Review

*******First Hourly Exam, Wed 9/20 at 10:20a in Collier 204*******

9/25	4	Redox	Exam Return
10/2	5	Thermochemistry	POGIL #3
10/11	6	Electronic Structure of Atoms	NONE (Fall Break)

*******Second Hourly Exam, Fri 10/13 at 10:20a in Collier 204*******

10/16	6	Electronic Structure of Atoms	Exam Return
10/23	7,8	Periodicity & Bonding Intro	POGIL #4
10/30	9	Molecular Geometry	POGIL #5
11/6	9	Bonding Theories	Exam Review

*******Third Hourly Exam, Wed 11/8 at 10:20a in Collier 204*******

11/13	10	Gases	Exam Return
11/20	10	Gases	NONE (TG Break)
11/27	11	Intermolecular Forces	Exam Review

*******Fourth Hourly Exam, Wed 11/29 at 10:20a in Collier 204*******

12/4	11	Intermolecular Forces	Exam Return
12/11	Last Day of Class ☺		

*******Final Exam: TO BE SCHEDULED BY THE REGISTRAR*******

Dates of Note: Sept 5 – Last Day for Course Changes
 Oct 6 – Midsemester
 Nov 10 – Last Day to Withdraw from a Course