

CHEM113 B
General Chemistry I
Fall 2009

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Office Hours: TBD – see Blackboard site or the schedule on my office door

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Course Information:

- Lectures on M/W/F, 10:20-11:10am, in Collier HOSCI 202 (Mellon Lecture Hall)
- Problem Session on Tuesday at either 8:55-9:45a or 10:20-11:10a in Collier HOSCI 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, 11th ed.”
by Brown/LeMay/Bursten/Burdge
ISBN# 978-0-13-6006176
- Scientific calculator: Required for this course, must do exponents, logs, sci notation
YOU MUST HAVE ONE OF YOUR OWN for each quiz/exam
does NOT need to graph or be programmable
NOT a cell phone or other mobile communication device
- Black Board Site: Enrollment in CHEM113B course page is required at
<http://blackboard.moravian.edu/>. Here you will find:
 - important announcements and info (e.g. office hrs)
 - link to text book web site (with practice quizzes!)
 - assigned problems for quizzes, answer keys for quizzes
 - lecture handouts, learning activity answer keys
 - learning goals for each chapter and much more!
- Optional manual: “Solutions to Exercises, 11th ed.” by Wilson
ISBN#978-1-429-21241-0

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/academic.html>. 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/academic/academic2.html>. 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.

Policy on Cell Phones/Mobile Communication Devices:

Please have the courtesy to turn off your cell phone ringer during course meeting times. Please do not answer your phone or use it in any other way during class. For timed experiences (quizzes and exams) cell phones MUST be put away out of sight (in your backpack, NOT your pocket) or else a score of zero will be assigned by your instructor.

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)

Students who wish to request accommodations in this class for a disability should contact Mr. Joe Kempfer, Assistant Director of Learning Services for Disability Support, 1307 Main Street (610-861-1510). Accommodations cannot be provided until authorization is received from the office of Learning Services.

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	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+

Percentage	Letter Grade
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
< 60	F

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

I.	Exams (4@125pts each)	500pts
II.	Optional Quizzes (8@16pts each)	
III.	Problem Sessions	100pts
III.	Final Exam	200pts
IV.	Laboratory	200pts
	Total for Course	1000pts

I. Exams: Four exams will be given in class during the semester. These exams will be administered during lecture time on September 23rd, October 16th, November 4th, and November 23rd IN A LOCATION TO BE ANNOUNCED. 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 (10% of your semester grade) and exam reviews. Absences will be noted and are likely to negatively affect your course performance.

IV. Final Exam: This exam will be cumulative and given at 1:30 pm on December 17th in a location to be determined by the Registrar. The college policy on final exams can be found at <http://www.moravian.edu/studentLife/handbook/academic/academic.html>.

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

Dates to Note:

Sept 8 – Last Day for Course Changes
Oct 9 – Midsemester
Nov 13 – Last Day to Withdraw from a Course

Tentative Reading/Lecture/Problem-Session Schedule:

Week of...	Chapter(s)	Lecture Topic(s)	Problem Session
8/31	1	Matter and Measurement	Math Skills
9/9	2	Atoms, Molecules, and Ions	Activity #1
9/14	3	Stoichiometry	Activity #2
9/21	3,4	Stoichiometry, Solutions	Exam Review

*******First Hourly Exam, Wed 9/23 at 10:20am in LOCATION TBA*******

9/28	4	Aqueous Reactions	Exam Return
10/5	4	Redox	Activity #3
10/14	5	Thermochemistry	NONE (Fall Break)

*******Second Hourly Exam, Fri 10/16 at 10:20am in LOCATION TBA*******

10/19	5,6	Thermochem, EM Radiation	Activity #4
10/26	6	Electronic Structure of Atoms	Activity #5
11/2	7	Periodicity	Exam Review

*******Third Hourly Exam, Wed 11/4 at 10:20am in LOCATION TBA*******

11/9	8	Bonding Intro	Activity #6
11/16	9	Bonding Theories	Activity #7

*******Fourth Hourly Exam, Mon 11/23 at 10:20am in LOCATION TBA*******

11/30	10	Gases	Activity #8
12/7	11	Intermolecular Forces	Exam Review

*******Final Exam: Thurs 12/17 at 1:30pm Location TBA*******