

Instructor: Shari U. Dunham, Ph.D. Office phone: 610-625-7105
Collier HOSCI Room 214 email: sharidunham@moravian.edu
Office Hrs: M 8:30-9:30am, T 11:15-12:15, R 9-10am, and others by appt

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 204
- Laboratory on either T, W, R or F afternoon, in Collier 210 (separate lab syllabus)

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 Materials:

- The required **text** for the course is Chemistry: The Central Science, 11th ed. by Brown, LeMay, Bursten & Burdge (2009), ISBN#978-0-13-6006176, Pearson/Prentice Hall.
- A scientific **calculator** is required for this course. It does NOT need to graph or be programmable, but it must do exponents, logs, and scientific notation. **YOU MUST HAVE ONE OF YOUR OWN** for each quiz/exam and you may NOT use a cell phone or other mobile communication device for this purpose.
- Enrollment in CHEM113B **course page** on BlackBoard is required at <http://blackboard.moravian.edu/>. Your instructor will use this site to send and post important announcements, reminders and documents throughout the semester, including assigned homework problems for quizzes, answer keys for quizzes, lecture handouts, exam information, learning activity answer keys, learning goals for each chapter and much more!
- You will need a **bound composition notebook** (NOT spiral) with numbered pages for your homework journal. You will be allowed to use this journal during in-class exams.
- **OPTIONAL:** The complete **solutions manual** to all problems in the text: Solutions to Exercises, 11th ed. by Wilson, ISBN#978-1-429-21241-0. Copies of this manual will be available in the chemistry lounge (HOSCI 221) and on reserve in Reeves library.

Course Expectations:

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

- Identifying simple inorganic salts and simple inorganic compounds by name and formulae
- Solving basic stoichiometric problems involving weight, solutions, and gases in any combination
- 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 in the student handbook¹. If you anticipate an unavoidable absence (due to an extenuating and documented² circumstance), 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 honesty³ that applies to this course. 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.

Your Homework Journal:

Homework problems/exercises will be assigned for the material covered in each class meeting. Please work through these problems in your homework journal. These problems will not be graded and are intended to provide you with the minimum exercises to review important concepts in that chapter. You will be allowed to use your homework journal as a resource during the in-class exams this semester as long as you follow these rules:

- Only problems from the required text and from class activities can be in your journal
- No loose papers or sticky notes are allowed in the journal
- All journal pages must be numbered (these can be written by hand when you first purchase the notebook). No pages should be removed. Put a simple X through errors.

¹ <http://www.moravian.edu/studentLife/handbook/academic/academic.html>

² Your instructor will expect documentation from a health professional or academic dean regarding missed exams or laboratories.

³ <http://www.moravian.edu/studentLife/handbook/academic/academic2.html>

- Should you choose to use your homework journal as a resource during an exam, it must be handed in with your exam. Journals with extra information, missing pages, or scratched out words may result in lost points for that exam.

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 22nd, October 15th, November 3rd, and November 22nd 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 7 – Last Day for Course Changes
Oct 8 – Mid Term
Nov 5 – Last Day to Withdraw from a Course

Tentative Reading/Lecture/Problem-Session Schedule:

Week of...	Chapter(s)	Lecture Topic(s)	Problem Session
8/30	1	Matter and Measurement	Math Skills
9/8	2	Atoms, Molecules, and Ions	Activity #1
9/13	3	Stoichiometry	Activity #2
9/20	3,4	Stoichiometry, Solutions	Exam Review

*******First Hourly Exam, Wed 9/22 at 10:20am in LOCATION TBA*******

9/27	4	Aqueous Reactions	Exam Return
10/4	4	Redox	Activity #3
10/13	5	Thermochemistry	NONE (Fall Break)

*******Second Hourly Exam, Fri 10/15 at 10:20am in LOCATION TBA*******

10/18	5,6	Thermochem, EM Radiation	Activity #4
10/25	6	Electronic Structure of Atoms	Activity #5
11/1	7	Periodicity	Exam Review

*******Third Hourly Exam, Wed 11/3 at 10:20am in LOCATION TBA*******

11/8	8	Bonding Intro	Activity #6
11/15	9	Bonding Theories	Activity #7

*******Fourth Hourly Exam, Mon 11/22 at 10:20am in LOCATION TBA*******

11/29	10	Gases	Activity #8
12/6	11	Intermolecular Forces	Exam Review

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