Course Syllabus **General Chemistry I – CHEM113B** Fall 2013

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Office Hrs: Tues Aug 27th 1-2pm, Fri Aug 30th 2-3pm; weekly office hrs will be announced and posted after the first week of class.

Course Meeting Information:

- Class meetings on M/W/F 10:20-11:10am in Collier HOSCI 204 (Dana Lecture Hall) and on Tues (8:55-9:45am OR 10:20-11:10am) in Collier HOSCI 202 (Mellon Lecture Hall)
- Laboratory on Tues 12:45-3:45pm, Wed 1:15-4:15pm, Thurs 12:45-3:45pm, OR Fri 1:15-4:15pm in Collier General Chemistry Lab 210 (separate lab syllabus)

Course Description:
This is the first semester of a 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 the first semester of General Chemistry, 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:

- Required text: "Chemistry: The Central Science, 12th Edition" by Brown/LeMay/Bursten/Murphy/Woodward (ISBN#978-0-321-69672-4). Copies of this text will be available at the chemistry help sessions and on reserve in Reeves library.

- Required Sapling account: You are required to register with the Sapling Online Learning System and complete online homework assignments there throughout the semester. Instructions for student access to Sapling are printed on the last page of this document and are posted on the course BlackBoard site.

- Scientific calculator: Required for this course, must do exponents, logs, sci. notation
  does NOT need to graph and does NOT need to be programmable
  CANNOT be an app on your mobile device
  you MUST have one OF YOUR OWN for each quiz/exam

- Black Board Site: At http://blackboard.moravian.edu/ you can enroll in the course page for CHEM113B. Your instructor will use this site to send and post important announcements, reminders and documents throughout the semester. Please access this site often!

- Optional manual: "Solutions to Exercises in Chemistry: The Central Science, 12th Edition" by Wilson (ISBN#978-0-321-70500-6). Copies of this manual will be available at the chemistry help sessions and on reserve in Reeves library.

Learning Goals:
Students who complete this course are expected to be able to:

- Identify simple inorganic salts and simple inorganic compounds by name and forumulae
- Solve basic stoichiometric problems involving weight, solutions, and gases in any combination
- Write balanced chemical equations for simple reactions, including net ionic equations for reactions in aqueous solution
- Describe the atomic nature of matter including the components of the atom and the modern theories of their arrangement in the atom
- Predict the properties of atoms and explain these properties in terms of atomic interactions
- Qualitatively and quantitatively describe the basic heat transformations in chemical systems
- Draw Lewis structures for simple molecules from a chemical formula and predict the 3D geometry and hybridization around an atom
- Describe the bulk properties of matter and the intermolecular interactions that lead to these properties

Attendance Policy:
Your presence is expected at all course meetings (class, problem sessions, and laboratories). As a reminder, the college policy on attendance can be found in the student handbook. 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. George Fairchild (Collier HOSCI 212, x1595, email: gfairchild@moravian.edu).

Academic Honesty Policy:
Please be familiar with the college policy on academic honesty 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, not use, and not answer your cell phone during course meeting times. Use of the devices may be recognized by your instructor as disruptive classroom behavior and responded to as such. For timed experiences (quizzes and exams) communication devices 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 Dr. Dunham's office during office hours with questions
- Attend chemistry help sessions (Wed&Thurs pm, 7-9pm, CHOS 207)
- Contact Dr. Dunham 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 Ms. Elaine Mara, Assistant Director of Learning Services for Academic and Disability Support at 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 total number of points you earn in this course, according to the following scale:

Total points	Letter Grade
930-1000	A
900-929	A-
870-899	B+
830-869	B
800-829	B-
770-799	C+

Total points	Letter Grade
730-769	C
700-729	C-
670-699	D+
630-669	D
600-629	D-
< 600	F

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

I.	Exams (4@100pts each)	400pts
II.	Optional Quizzes (10@10pts each)	*
III.	Online Homework (10@15pts each)	150pts
IV.	Learning Activities (10@10pts each)	100pts
V.	Final Exam	150pts
VI.	Laboratory (12weeks) scaled to....	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 18th, October 9th, October 30th, and November 20th. 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 (see III below). 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. Homework: Online homework will be assigned and scored through the Sapling Online Learning System (see Sapling Access instructions at the end of this document). Assignment due dates will be posted to the course BlackBoard site. Additional end-of-chapter review problems (from the required text) may be posted to the course BlackBoard site and their complete solutions can be found in the optional solutions manual (on sale at the bookstore and on reserve in Reeves library).

IV. Learning Activities: Tuesday problem session times for this section will be used for group-based learning activities and exam reviews. Make-up learning activities CANNOT be arranged after an absence. Please communicate with Dr. Dunham ahead of time if you anticipate missing any problem session times or else you will earn a score of zero for that activity.

V. Final Exam: This exam will be cumulative, will follow the college policy on final exams, and will be given at 1:30 pm on December 10th in Collier 204.

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

Dates to Note:

Sept 3 – Last Day to Add or Drop a Course
Oct 4 – Mid Term
Nov 1 – Last Day to Withdraw from a Course

Tentative Reading/Lecture/Problem-Session Schedule:

Week of…	Chapter(s)	Lecture Topic(s)	Problem Session
8/26	1	Matter and Measurement	Activity #1
9/4	2	Atoms, Molecules, and Ions	Activity #2
9/9	3	Stoichiometry	Activity #3
9/16	3,4	Stoichiometry, Solutions	Exam Review
************First Hourly Exam, Wed 9/18 at 10:20am in Collier 204*************			
9/23	4	Aqueous Reactions	Activity #4
9/30	4	Redox	Activity #5
10/7	5	Thermochemistry	Exam Review
***********Second Hourly Exam, Wed 10/9 at 10:20am in Collier 204*************			
10/16	5,6	Thermochem, EM Radiation	NONE-Fall Break
10/21	6	Electronic Structure of Atoms	Activity #6
10/28	7	Periodicity	Exam Review
**********Third Hourly Exam, Wed 10/30 at 10:20am in Collier 204**************			
11/4	8	Bonding Intro	Activity #7
11/11	9	Bonding Theories	Activity #8
11/18	10	Gases	Exam Review
**********Fourth Hourly Exam, Wed 11/20 at 10:20am in Collier 204*************			
12/2	11	Intermolecular Forces	Activity #9
**************Final Exam: Tues 12/10 at 1:30pm Location TBA********************			

Instructions for student access to Sapling Learning for online homework and homework help in this course:

1. Go to http://saplinglearning.com and click "US Higher Ed" at the top right

2. (A) If you already have a Sapling Learning account, log in then skip to step 3.

   (B) If you have Facebook account, you can use it to quickly create a Sapling Learning account. Click the blue button with the Facebook symbol on it (just to the left of the username field). The form will auto-fill with information from your Facebook account (you may need to log into Facebook in the popup window first). Choose a password and timezone, accept the site policy agreement, and click "Create my new account". You can then skip to step 3.

   (C) Otherwise, click "create account". Supply the requested information and click "Create my new account". Check your email (and spam filter) for a message from Sapling Learning and click on the link provided in that email.

3. Find your course in the list (you may need to expand the subject and term categories) and click the link.

4. Enter the access code you've already purchased or select a payment option and follow the remaining instructions.

5. Once you have registered and enrolled, you can log in at any time to complete or review your homework assignments. During sign up - and throughout the term - if you have any technical problems or grading issues, send an email to support@saplinglearning.com explaining the issue. The Sapling support team is almost always more able (and faster) to resolve issues than your instructor.