

Chemistry 111 – General Chemistry for Scientists

Fall 2010

Sections 5

Instructor: Dr. Crisjoe A Joseph

Office: Lederle Graduate Research TowerA – Room 503

Office Hours: T 2:00p – 3:00p, W 10:00a – 11:30a

email: Use "Send "Message" in OWL

TA: Breanne Holmes

TA Office Hours: M 1:00p - 2:30p in the CRC

Course Description

General Chemistry for Scientists. The first half of a two-semester sequence covering: the basic principles of chemical structure and reactivity; the microscopic nature of atoms and molecules; the macroscopic properties of chemical systems. Topics include stoichiometry, thermochemistry, atomic structure, molecular structure, properties of gases.

4 credits, General Education - Physical Science

Meets: Monday/Wednesday/Friday, 50 minutes + Laboratory

Prerequisite

Working knowledge of basic algebra as evidenced by a grade of C– or higher in MATH 104 (or MATH 101 and MATH 102), or a score of 20 or higher on Part A of the Math Placement Exam.

Course Requirements

1. You must have a PASSING EXAM AVERAGE on the 4 exams in order to pass this course.
2. You must complete and pass the laboratory in order to pass this course.
If you fail the course, you must retake the lab. If you received a grade of D or higher, you do not need to repeat the lab.
3. You must attend the class in which you are registered in order to receive credit for exams.
4. You must use the OWL message system for ALL communications for the course.
5. You must take the final exam in order to pass the course.
6. You must have a grade of C-, or better in Chem 111 to take Chem 112.

Required Materials

- *Chemistry and Chemical Reactivity*, Kotz, Treichel and Townsend, 7th Edition. (6th Edition OK).
Note: The *ebook* is available in OWL at no cost.
- Calculator: logarithms, antilogs and scientific notation
- 2 pencils with erasers (for exams)
- American Optical Safety Glasses #484A - Textbook Annex

Course Information

- The section website can be found at <http://people.chem.umass.edu/cjoseph/chem111>
- The course website can be found at <http://www.chem.umass.edu/genchem/chem111/111index.html>
- The Spark website can be found at <https://spark.oit.umass.edu/webct/entryPageIns.dowebct>
- Lab writeups are linked at the *course* website. Print them and bring them to each lab period.
- Please check both websites often.
- Use the Spark discussion board to communicate with one another about routine questions. One extra credit point will be given for every entry *completed before* Exam 2, up to 4 points.

Grading

Exam 1	100 pts	Monday, Oct 4	<i>In Class</i>
Exam 2	100 pts	Monday, Nov 1	<i>In Class</i>
Exam 3	100 pts	Monday, Dec 6	<i>In Class</i>
Final	100 pts	TBA	
Lab	100 pts		
OWL Homework	50 pts	Check OWL for due dates.	<i>Online</i>
Extra Credit	TBA		
TOTAL	550 pts		

Approximate Grade cutoffs: A 93, A- 90, B+ 87, B 83, B- 80, C+ 77, C 73, C- 70, D 60%
Typical average for this course is 75%.

Exams

Exams 1-3 will be multiple-choice, "pyramid style" exams, meaning that you will take one version of the exam in class, using only your understanding of the material. You will then take a second version of the exam at home, using whatever resources you wish. Your grade will be the average of the two scores. Sample exams are posted to help you prepare. The final exam will **NOT** be pyramid style. A typical overall exam average in this class is 67%. Exam grades below 50% are failing. I do not "curve" individual exams.

- If the score on your final exam is higher than any one of your averaged hour exams, the lowest hour exam grade will be dropped and the grade on the final will be doubled.
- NO MAKEUP exams will be given in this course. If you miss an exam for *any* reason this will be considered your lowest exam grade and the score on the final exam will *automatically* be doubled to count for the missed exam. You *do not need to report this* to me.
- If you miss more than one exam a score of zero will be assigned to any other missed exam.
- If you have a conflict with an exam time due to military service, religious observance, varsity sports, or another legitimate, documented reason, I will try to work with you to find an *earlier* time to take the exam. If an earlier time cannot be arranged, this will be considered your lowest exam grade and the final will be doubled to make up for it.
- The final will not be given early.

Emergency and Honesty Policies

- If you are ill or an emergency arises it is your responsibility to keep up with the lectures, laboratory, and homework. You *do not need to report this* to me.
- You are expected to *know and abide by* the Academic Honesty Policy of the campus:

http://www.umass.edu/dean_students/codeofconduct/acadhonesty/

"Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty."

You must submit your own work on laboratory assignments.

You must *flush all calculator memories of any information* before coming into an exam.

You may use **ONLY** your brain, a pencil, and a calculator to exams (*no cell phones, cheat sheets, or anything else ...*).

Laboratory <http://www.chem.umass.edu/genchem/chem111/111index.html>

Meets every other week. Labs begin the week of September 13, for **odd numbered** sections. A complete calendar is linked on the Laboratory web site. Read the lab policy and safety information posted on the web site BEFORE the first laboratory. Write-ups for each laboratory experiment must be printed from this site and brought to lab. See the FAQ links on the Lab web site for questions about lab waivers, missed labs or quizzes. All other questions about the laboratory should be directed to your laboratory instructor.

OWL Electronic Homework System

- Two assignments per week are due on Sunday and Thursday nights.
I allow a 24-hour grade period. This means if you complete the assignment within 24 hours of the deadline you *WILL* receive credit. To access assignments after the due date click on "Past Due Assignments". If you miss the deadline *complete the homework* ! If you complete an assignment after the due date, but within the 24-hour grace period, the green check *WILL NOT SHOW* up until I tell OWL to show it. **DO NOT SEND ME A MESSAGE ABOUT THIS.** You *WILL* receive credit.
- 10% of the OWL modules will be dropped.
If you miss an assignment for *any* reason, it is considered part of this 10% and will be automatically dropped. It is not necessary to report this to me. **NO** Extensions will be granted beyond the 24-hour grace period and the 10% dropping of modules.
- You may repeat each assignment as often as you like.
You will get new questions each time, so this is a great way to study for an exam. The best score completed within the 24-hour grace period counts toward your grade.
- Use the OWL message system to send email to me and our TA about the class.
- The Laboratory has its own OWL course and these assignments count towards 25% of the lab grade.
There is **NO** 24-hour grace period for "Lab OWLs".

Where to get help

- **Office Hours**
- **The Computer Resource Center (CRC) - ISB 325**
Staffed by Chemistry faculty and graduate teaching assistants. It's a great place to bring your books, study chemistry, and get help with coursework.
- **Learning Resource Center (LRC) - 10th floor of W.E.B. DuBois Library**
We will have two Supplemental Instructors assigned to our class. They will conduct **FOUR** 1.5 h review sessions every week. Tutors are also available for individual help in the LRC.

Tentative Schedule

Week 1	Ch 1: Basic Concepts of Chemistry/The Tools of Quantitative Chemistry
Week 2 & 3	Ch 2: Atoms, Molecules and Ions/ Ch 3: Chemical Reactions
Week 4**	Ch 3: Chemical Reactions
Week 5 & 6	Ch 5: Energy and Chemical Reactions
Week 7 & 8	Ch 6: Structure of Atoms/Ch 7: Periodic Trends
Week 9	Ch 7: Periodic Trends
Week 10 & 11	Ch 8: Bonding and Molecular Structure
Week 12 & 13	Ch 9: Orbital Hybridization and Molecular Orbitals
Week 14	Ch 11: Gases

**Note: Ch 4 will be covered in lab. Be sure to read this material!!