

Chemistry 111R/111L Schedule Fall 2009			
Recitation times	Monday	Thursday	Friday
Smith room numbers in parentheses	(7) 8:00-8:50 BM (SM320)	(1 & 333) 10:55-11:45 LL (SM301) (2) 10:50-11:40 CB (SM320) (3) 1:40-2:30 LL (SM205)	(4) 8:00-8:50 IN (SM203) (5) 11:00-11:50 BM (SM205) (6) 2:00-2:50 JK (SM413)
Lab times	Monday	Thursday	Friday
All labs meet in Smith 401 unless otherwise indicated	(7) 9:00-11:15 BM (meets in Smith 411)	(1 & 333) 8:30-10:45 LL (2) 11:50-2:05 CB (3) 2:40-4:55 LL	(4) 9:00-11:15 IN (5) 12:00-2:15 BM (6) 3:00-5:15 JK

Instructor	Office	Phone	Email	Office hours
Chris Bender	Smith 415	503-5755	cbender@uscupstate.edu	MWF 9:15-10:45, T 11-12, and by appointment
Isabel Nunez	Smith 322A	503-5734*	inunez@uscupstate.edu	M 9-10, W 11-12, and by appointment
Judy Krueger	Smith 414	503-5712	jkruieger@uscupstate.edu	T&W 2:30-4, W&F 10-11
Lisa Lever	Smith 409	503-5713	llever@uscupstate.edu	MWF 10-11:30, Th 1-1:30, and by appointment
Bilan Mo	Smith 322A	503-5734*	bmo@uscupstate.edu	F 10:00-11:00 am
* (or leave message at 503-5725)				

Chem 111L website: <http://faculty.uscupstate.edu/cbender>

Required materials: *Chemistry 111 Lab Manual* (revised for Fall 2009)

USB storage device for computer data

1 pair of goggles stamped with Z87.1

Safety: All students are required to wear goggles at all times in lab. Even if YOU are done with lab or are only doing calculations, if you are in the lab, goggles must be worn. You are responsible for having your goggles at the beginning of each lab period. Goggles may be locked in your locker between labs. You must wear closed-toe shoes to perform work in the laboratory. If you arrive with inappropriate footwear, you will not be allowed to start lab until you have corrected the problem. You may want to keep an appropriate pair of shoes in your car in case you forget. In addition, if you wear shorts or skirts that end above the knees or clothing that exposes your midriff, you must wear a lab apron for protection. These are available in the lab.

Chem 111 Lab Schedule Fall 2009		
Lab date	Experiment	Work to be turned in at the beginning of the lab period:
Aug. 20-21	No Lab	N/A
Aug. 24, 27-28	0 Safety	N/A
Aug 31 & Sept. 3-4	1 Basic lab techniques	Spreadsheet exercise, Safety exercise, Safety quiz
Sept. 10-11 & 14	2 Paper chromatography	Expt. 1 report
Sept. 17-18 & 21	3 Physical properties	Expt. 2 report
Sept. 24-25 & 28	7 Hydrogen emission	Expt. 3 report
Oct. 1-2 & 5	8 Periodic properties	Expt. 7 report
Oct. 9-10	Fall Break To keep labs in phase, no lab on Monday Oct 12, too!	N/A
Oct. 15-16 & 19	4 Alum from aluminum cans	Expt. 8 report
Oct. 22-23 & 26	5 Solutions and titrations (week #1 only)	Expt. 4 report, abstract Expt. 4
Oct. 29-30 & Nov. 2	6 Chemistry of copper Midterm exam Expt. 1,2,3,7,8 given in recitation	Expt. 5 report
Nov. 5-6 & 9	9 Molecular shapes	Expt. 6 report
Nov. 12-13 & 16	10 Thermochemistry	Expt. 9 report
Nov. 19-20 & 23	11 Gas laws	Expt. 10 report, abstract Expt. 10
Nov. 26-27	Thanksgiving	N/A
Nov 30 & Dec. 3-4	Check-out Final exam Expt. 4,5,6,9,10	Expt. 11 report, Portfolio

Disclaimer: The instructor reserves the right to make adjustments in the syllabus and schedule as necessary.

Objective: Chemistry is an *experimental science*. Ultimately, chemical knowledge, laws, models, and theories are based on or must be consistent with experimental observations. In the current educational jargon, *experiential learning* is the very essence of chemistry. In chemistry

lab, you will develop skills in using the tools of the trade, in observing and measuring phenomena, in interpreting these observations and data in order to convert them to scientific information, and in evaluating the validity of the results. The lab experience is thus much more than merely following a recipe: your task is to connect the experiments you do with important concepts such as *elements* and *compounds*, *the mole*, *the gas laws*, *electronic energy levels*, etc. so that you see the link between these concepts and their experimental bases.

Come to lab prepared: To make the best use of your time in lab, read the experiment in the lab manual, answer the prelab questions, review relevant ChemPages sections, and study the calculations required in the lab exercise and any spreadsheets that will be used before coming to lab. During the lab period you will be recording observations and measurements on the data sheets in your lab manual. Remember to bring your calculator and a floppy disk or USB storage device to lab.

Attendance: If you miss a lab it must be made up in another lab section that week, otherwise the grade for that lab is a zero. If you miss a lab, you are still responsible for the material covered in that lab on the midterm and final exams.

Grading: The lab grade will count as 25% of your Chemistry 111 grade. The lab grade will be based primarily on your lab reports, written abstracts, and lab midterm and final exam. Below are some criteria on which your lab reports will be graded.

1. All experiments are conducted in a safe manner.
2. All data/observations are obtained and recorded in the appropriate location.
3. All questions in the lab report are answered clearly and accurately. Responses requiring more than a couple of words are written in sentences that are logical and conform to conventional rules of grammar.
4. All calculations are performed accurately and presented in a clear manner with the appropriate significant figures and units.
5. All work is legible.
6. The report is turned in on time.
7. **The work and experimental data presented is your own.** The answers to questions must be written in your own words. You must perform all calculations. Any copying or plagiarism will incur consequences. (See the USC Upstate Student Handbook for details.) In addition, do not let your work be copied.

The possible points for each lab assignment are shown in the table on the next page. There is room in this table to include your score for each graded piece so you can keep track of your progress in the course. Also, to prepare for the midterm and final exam, keep all of your graded lab work organized in a portfolio. The portfolio will be collected after the lab final exam and graded for completeness.

Deadlines: Unless otherwise announced by the lab instructor, lab reports are due at the beginning of the next lab meeting (1 week after the experiment has been performed); late lab reports will receive a 10% reduction in points, and **no reports will be accepted more than one week late**. Near the end of the semester, normal deadlines may be shortened.

Experiment/Exam	Work	Possible Score	Your Score
0 Safety	Safety exercise	10	
	Spreadsheet	20	
	Safety quiz	10	
1 Basic Lab Techniques	Lab report	40	
2 Paper Chromatography	Lab report	40	
3 Physical Properties	Lab report	40	
4 Alum	Lab report	40	
	Abstract	50	
5 Solutions and Titrations	Lab report	40	
6 Chemistry of Copper	Lab report	40	
7 Hydrogen Emission	Lab report	40	
8 Periodic Properties	Lab report	40	
9 Molecular Shapes	Lab report	40	
10 Thermochemistry	Lab report	40	
	Abstract	50	
11 Gas Laws	Lab report	40	
Check-out	Check-out assignment	10	
Portfolio	Portfolio of graded work	30	
Midterm exam	Expt. 1,2,3,7,8	200	
Final exam	Expt. 4,5,6,9,10	200	
Total (dropping lowest lab report grade)		980	
Grade	(Divide your total by 980 and multiply by 100)		

Students with disabilities: In keeping with University policy, any student with a disability who requests academic accommodations should contact Disability Services at 503-5199 to arrange a confidential appointment with the Disability Services Coordinator. Students are encouraged to seek an appointment as early in the semester as possible, as accommodations are not provided retroactively. Letters of accommodation must be signed and printed on letterhead from the Disability Services office. It is the student's responsibility to provide these letters to professors in a timely manner so that accommodations may be put in place.

Consult a physician if you are pregnant or have any other medical condition which might render you susceptible to exposure to the chemicals used in this laboratory

Disclaimer: The instructor reserves the right to make adjustments in the grading policy of the course if necessary.