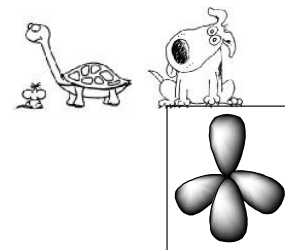


Chemistry of Living Things Laboratory (SCHM 109L)



Recitation	Thursday	Friday
	(001) 8:25 -9:15 (LBCL 229) (002) 10:50-11:40 (SM 205) (003) 1:40-2:30 (LBCL 251)	(004) 8-8:50 (SM 203) (005) 11-11:50 (ACAT 203) (006) 2-2:50 (SM 203)
Lab Times <i>All labs meet in Smith 401</i>	Thursday	Friday
	(001) 9:30-11:45 (SC) (002) 11:50-2:05 (JK) (003) 2:40-4:55 (IN)	(004) 9-11:15 (IN) (005) 12-2:15 (JK) (006) 3-5:15 (IN)

Instructor	Office	Phone	Email	Office hours
Dr. S. Caldwell	SM 409	Leave a message *	scaldwell2@uscupstate.edu	T 3-4, W & F 11-1
Dr. J. Krueger	SM 414	503-5712	jkrueger@uscupstate.edu	M&W 11-12, T 10-11, Th 9:30-10:30, F 10-10:30
Dr. I. Nunez	SM 220	503-5734 *	inunez@uscupstate.edu	W & Th 11-12, F 1-2

*or leave a message at 503-5725

Materials

1. *Chemistry 109 Lab Manual*, available in the USC Upstate bookstore
2. **Safety goggles** stamped with Z87.1. ***Must bring to lab by second lab meeting!!!***
3. Casio fx-260_{SOLAR} calculator

Objectives

Because chemistry is an experimental science, you must experience a laboratory setting to understand the subject. In this chemistry lab, you will develop skills in using lab equipment, heighten your powers of observation and measurement, and increase your abilities to interpret and analyze results. Most of the labs will complement our discussions from lecture.

Course Activities

Laboratory: The exercises performed in the lab are designed to give you a feel at a simple level for how chemical experiments are done and to show how an experimental result can support or contradict a hypothesis. Make sure you ***have read the material for the lab*** to be performed that day and have, where requested, answered the pre-lab questions. For some labs you will be asked to use spreadsheet & graphing programs.

Recitation: The recitation will provide an informal setting for questions and discussion of lecture material, of laboratory exercises and of suggested homework problems (see web page). Please come to class prepared to ask questions and ***get involved in problem solving***.

Attendance

Attendance is **required** for all laboratory experiments. If you have a good reason to miss a lab, you may be allowed to attend another lab section that week (consult with the lab instructor to see if there is space available). Any lab not performed or made-up will receive a zero. The lowest lab report grade will be dropped to allow for illness.

If you miss a graded exercise in recitation because of an excused absence, you must make it up as soon as you return to class. Absences will be excused only if you turn in a note you have signed that states the day of your absence & reason (which must be reasonable, *i.e.*, illness) for this absence.

Safety

All students are required to wear goggles at all times in the lab. Even if you are done with the lab or are only writing in your notebook, you must wear goggles if anyone else is still doing lab work. In addition, you must wear close-toed shoes in the laboratory. If you arrive without goggles or appropriate footwear, you will not be allowed to start the lab until you have corrected the problem. If you live far from campus, you might consider putting an extra pair of appropriate shoes in your car or backpack. If you are wearing clothes that end above the knee (e.g. a short skirt or shorts), or that do not sufficiently cover your torso, you must wear a lab apron or lab coat.

Grading Procedures

The laboratory work will be worth 25% of the total course grade for SCHM 109. There are twelve lab exercises planned for the semester. You will need to perform each lab and complete a lab report for each one to get any credit. *Completing a report for all or any portion of an exercise that you did not actually perform would be a violation of the student honor code.* Each lab report will be worth 1 point (1 % of your overall class grade). Other factors that influence the lab grade are: preparation for lab, punctuality (grades on lab reports will be lowered at the discretion of the instructor if you are repeatedly late for lab), proper lab technique, and safe lab practice. Most of the lab reports will be due the following week in lab. Near the end of the semester, deadlines may shorten. Late lab reports will lose 10% if handed in within four days of the due date. Reports more than four days late will lose 15%. No lab report will be accepted after graded lab exercises have been returned to the class as a whole (usually 1 week). There will be five quizzes that cover the lab material. Each quiz will be worth 1 to 3 points depending on the number of labs covered, for a total of 10 points. There will also be a safety quiz worth one point. Keep your graded lab reports and quizzes. At the end of the semester, you will submit them as a portfolio for credit. There will not be a lab final.

Below are some criteria on which your lab reports will be graded.

1. All parts of the experiment are performed, and they are conducted in a safe manner.
2. All the required data/observations are obtained and recorded in the appropriate location.
3. All questions 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 clearly, ***with correct significant figures & units.***
5. All work is legible.
6. The report is turned in on time.

AND VERY IMPORTANT!

7. ***The data, calculations, graphs, spreadsheets and written answers presented are your own.*** The answers to questions must be the result of your own thinking and writing. **You** must perform all calculations. Do not copy or plagiarize. Also, do not let your work be copied. If you need clarification in this area, talk to your instructor and see "The Code of Academic Integrity" in the Student Handbook or at <http://www.uscupstate.edu/studentaffairs/dean/>

Grading Summary: Lab reports 1 pt each (12 pts), Library assignment (2 pts), Safety quiz (1 pt), Lab quizzes 1-5 (10 pts)
Metric mini-lab (0.2 pt)
Portfolio of graded labs & quizzes (0.8 pt)
(0.05 points ea for labs from Sprdsheet Ex to Enzyme kinetics lab, quizzes 1- 4, and safety qz)
Total = 26 - 1 (lowest lab grade dropped) = 25 points

The portfolio will be submitted the last lab class. By keeping graded assignments together, you will have an aid to study for lab quizzes and will be easily able to submit the work as your portfolio.

Modified SCHM 109 Lab Schedule Spring 2011		
Date (lab week)	Experiment	Work to be turned in at start of lab period
1/12 & 1/13 (1)	Safety & spreadsheet exercise	
1/19 & 1/20 (2)	Basic lab techniques (BLT)	Safety Quiz, Spreadsheet exercise <i>Safety signature</i>
1/26 & 1/27 (3)	VSEPR & Molecular Shape	BLT report
2/2 & 2/3 (4)	Gas laws	VSEPR & Molecular Shapes report
2/9 & 2/10 (5)	Chemistry of copper	Gas laws report, <i>Quiz 1 BLT (1 pt)</i>
2/16 & 2/17 (6)	Representing organic structures	Chemistry of copper report
2/23 & 2/24 (7)	Titration of vinegar	Representing Organic Structures report <i>Quiz 2 VSEPR & Gas laws (2pt)</i>
3/1 & 3/2 (8)	Kinetics	Titration of vinegar report
3/5-3/9 (9)	SPRING BREAK, no classes	
3/15 & 3/16 (10)	Equilibrium	
3/22 & 3/23 (11)	Meet in library: CINAHL session	Kinetics report
March 27 3/29 & 3/30 (12)	Last day to withdraw w/o penalty DNA I	Equilibrium report <i>Quiz 3 Chem of Cu- Titration of vinegar (3 pt)</i>
4/5 & 4/6 (13)	Enzyme kinetics	DNA I report
4/12 & 4/13 (14)	DNA II	Enzyme kinetics report DNA II report (w/prelab) due <u>end of period</u> <i>Quiz 4 Kinetics & Equilibrium (2 pt)</i>
4/19 & 4/20 (15)	Quiz 5	CINAHL assignment , portfolio <i>Quiz 5 Enzyme Kinetics, DNA I (2 pt)</i>

Other useful materials for SCHM 109 are available at: <http://faculty.uscupstate.edu/jkrueger/>

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 (asthma is an important example) that might render you susceptible to problems from the chemicals used in laboratory.

Disclaimer: The instructor reserves the right to adjust the syllabus & schedule as necessary.