Syllabus

General Chemistry Lab I
CHE 120L-014
Spring 2006
Thursday 9:25 – 12:25 Room SC 422

Instructor

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Office hours by appointment

Required Texts/Supplies/Resources

1. Laboratory manual for General Chemistry I CHE120L, 4th edition
2. Student Lab Notebook, Hayden-McNeil Specialty Products
3. Safety Goggles
4. www.nku.edu/~chemistry/general_chem

Goals of Course

1. Proper keeping of a lab notebook.
2. Hands-on experience in safely and comfortably handling chemicals and using equipment.
3. Reinforce chemistry learning from lecture.
4. Improve writing skills
5. Have some fun!!!

Pre-lab Preparation

Because lab time is so critical, you want to spend your time in the lab doing experiments and recording your observations. In order to accomplish this objective, you need to do setup work prior to entering the lab so that you can get started immediately.

1. Read in the lab manual the objective of the experiment to be done, the background information and the protocol (procedure) to be carried out.

2. Enter into the student lab notebook the following areas. If your handwriting is illegible, print.
   a. The information requested at the top of the page for the experiment to be done
   b. The objective of the experiment
   c. Materials and equipment to be used

d. Protocol (procedure) on left hand side of page
e. On right hand side of page a section labeled: Data/Observations/Procedure change. This will be filled in during the lab

3. Read safety rules on page vii of laboratory manual before each experiment.

Lab Time

1. Safety goggles must be worn at all times.

2. Follow protocol and record data, observations and any protocol changes in the notebook. The reason for noting any changes in procedure is so that someone can duplicate exactly what you have done. All data generated, any observations made and any changes in procedure must be in the notebook. Filling out the data report sheets from the lab manual is not an adequate substitute. The emphasis for the notebook is complete, not neat. The lab notebook is almost sacred in a chemist's mind.

3. Sign and date each page. Put a large X across the bottom of the last page where there is unused space. Have another student witness your signature on each page. Points will be deducted if signatures are missing

4. Clean area where you have been working

5. If you have finished your experiment, leave so as not to distract other students still experimenting..

Post lab

1. Using the data and observations generated, complete the data sheet in the laboratory manual.

2. Complete post lab questions from the laboratory manual.

3. Data sheets and post lab questions can also be printed out from the general chemistry Website.

Lab Report

A lab report must be turned in one week after completion of an experiment. The drop dead date (zero credit) for a report is two weeks after the completion of the experiment. It may be handwritten if your writing is readable. The lab report consists of the following parts.

1. Cover page, with name, title of the experiment and a one-paragraph summary of the experiment. The summary should consist of three parts: the purpose of the

experiment, what you did, and your specific results. You are writing it for someone who know chemistry but not the specific experiment you did.

2. One of each of the notebook duplicate pages used for each experiment. (45 points)

3. Data sheet/calculations/any graphs generated during data analysis. (25 points)

4. Completed post lab questions. (15 points)

All these parts should be stapled together.

Typical Summary

The purpose of this experiment was to determine the densities at room temperature of water, an unknown solution and copper. Several measurements of mass and volume were carried out directly on water and the unknown solution, whereas with copper the volumes of given masses of copper were determined by water displacement. The average density of water at 22.4C was found to be 0.973g/ml using a graduated cylinder for volume measurement and 0.9904g/ml using a pipet for volume measurement versus a reference value of 0.9977 g/ml. The average density of unknown solution B at 22.4C was determined to be1.05 g/ml using a graduated cylinder for volume measurement. The density of copper at 22.4C was 8.64 g/ml versus a reference value of 8.89 g/ml

Chemistry Department Attendance Policy

Each student in a General Chemistry Lab will be allowed to make up the experiment for two excused absences during the semester. An excused absence is one for which the student has a good reason (something beyond the Student's control) for not being able to attend the regularly scheduled lab period. The student must contact their lab instructor either in person, by phone, e-mail or letter within two weekdays of the missed lab. A student who waits longer than 2 weekdays after a missed lab to request a makeup will normally not be allowed to make up the lab experiment and will be assigned a grade of zero for that experiment. The student will be expected to verify their reason for requesting an excused absence. The lab must be made up no later than the last lab period of the week following the scheduled experiment. The student must also obtain permission from the make up lab instructor. Absences beyond two each will be assigned a grade of zero.

120L - 020 Procedure Call me either before or within two days after a missed lab and I will make arrangements with you for the makeup lab.

Grading

Overall score	1350-1500	1200-1349	1050-1199	900-1049	0-899
Letter grade	A	B	C	D	F

Semester Schedule

Date	Experiment	Report due date	Point value
1/12/2006	Check-in,safety Intro msmsts	1/19/2006	50
1/19/2006	Chromatography	1/26/2006	100
1/26/2006	Measurements	2/2/2006	100
2/2/2006	Chem. & Phys. Properties	2/9/2006	100
2/9/2006	Zinc Iodide	2/16/2006	100
2/16/2006	Alum	2/23/2006	100
2/23/2006	Chem Rxns	3/2/2006	100
3/2/2006	Test No. 1 through Rxns		125
3/16/2006	Cu Cycle	3/23/2006	100
3/23/2006	Titration	3/30/2006	100
3/30/2006	Calorimetry	4/6/2006	100
4/6/2006	Spectroscopy	4/13/2006	100
4/13/2006	Bleach Titration	4/20/2006	100
4/20/2006	VSEPR	4/27/2006	100
4/27/2006	Test No. 2 Check-out		125
			Total 1500