Syllabus

General Chemistry Lab II
CHE 121L – 016
Spring 2005
Thursday 1:40 – 4:40 Room SC 426

Instructor

Dr. C. William Blewett
859-341-7416
billblewett@aol.com
Office hours by appointment

Required Texts/Supplies/Resources

1. Laboratory manual for General Chemistry II CHE121L, 3rd 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 handling chemicals and using equipment.
3. Reinforce chemistry learning from lecture.
4. 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 the following setup work prior to entering the lab.

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 last section 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 through any unused space. Finally, have another student witness your signature.

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.

Lab Report

A lab report must be turned in generally one week after completion of an experiment and prior to starting the next 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 what was done and what results were found. A typical summary is shown below. (15 points)

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 Lab Summary

The amount of phosphorus (as P2O5) present in a commercial fertilizer was determined in triplicate by a gravimetric procedure. In this procedure, the phosphate in a fertilizer solution of known concentration was precipitated as magnesium ammonium phosphate by treatment with magnesium sulfate and ammonium hydroxide. The precipitate was collected, washed, dried and weighed. The average experimental phosphorus content was found to be 23.67% versus a claimed content of 30.00%.

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.

121L - 016 Procedure Call me either before or after a missed lab and I will make arrangements for the makeup lab.

Semester Schedule

Date	Experiment	Report due date	Point value
1/13/05	Check-in, safety Phosphate	1/27/05	100
1/20/05	Distillation/GC	1/27/05	100
1/27/05	Kinetics	2/3/05	100

2/3/05	Aspirin – part 1	2/17/05	
2/10/05	Aspirin – part 2	2/17/05	200
2/17/05	Chem Equil	2/24/05	100
2/24/05	FP Depression	3/3/05	100
3/3/05	Test No. 1		150
3/17/05	Acid and Bases	3/24/05	100
3/24/05	Titration Curve	3/31/05	100
3/31/05	Tin Tetraiodide	4/7/05	100
4/7/05	Qual anion tests	4/14/05	100
4/14/05	Electrochem	4/21/05	100
4/21/05	Nuclear	4/28/05	100
4/28/05	Test no. 2		150

Overall score	1440-1600	1280-1439	1120-1279	960-1119	0-959
Letter grade	A	B	C	D	F