Syllabus

General Chemistry Lab II
CHE 121L-015
Spring 2007
Thursday 9:25 – 12:25 Room SC 426

Instructor

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Office hours by appointment

Required Texts/Supplies/Resources

1. Laboratory manual for General Chemistry II CHE121L, 4th edition
2. Student Lab Notebook, Hayden-McNeil Specialty Products
3. Safety Goggles
4. www.nku.edu/~chemistry/general_chem

Expected Learning Outcomes

1.Proper keeping of a lab notebook. 2.Hands-on experience in safely and comfortably handling chemicals and using equipment. 3.Reinforcement of chemistry learning from lecture. 4.Improvment of writing skills. 5. Adherence to the Student Honor Code. This Code can be accessed at www.nku.edu/~deanstudents/student_rights/honorcode/htm. 6. Have some fun!!!

Students with Disabilities

Students with disabilities who require accommodations (academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. This office is in University Center Suite 320 and the phone number for this office is 572-6373.

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 web site.

Lab Report

A lab report should 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. (15 points) The summary should have three parts: the purpose of the experiment, what you did, and your specific results. You are writing it for someone who knows 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)

Formal reports will be required for the F.P. Depression and Titration Curve labs and the format to be used for these reports will be given out at the appropriate time.

Typical Summary

The amount of phosphorus (as P_2O_5) present in a commercial fertilizer, Miracle-Gro, was determined in triplicate by a gravimetric procedure. In this procedure, the phosphate in a fertilizer solution of 15% concentration was precipitated as magnesium ammonium phosphate hexahydrate by treatment with magnesium sulfate and ammonium hydroxide solutions. The precipitate was collected, washed, dried 1 week and weighed. The average experimental phosphorus content was found to be 23.67% versus a claimed content of 30.00%. The % relative standard deviation of the three tries was 2.792%

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 - 015 Procedure Call or e-mail 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	1440-1600	1280-1439	1120-1279	960-1119	0-959
Letter grade	A	B	C	D	F

Semester Schedule

Date	Experiment	Report due date	Point value
1/11/07	Check-in, P in Fertilizer	1/25/07	100
1/18/07	Aspirin 1		
1/25/07	Aspirin 2	2/1/07	200
2/1/07	Kinetics	2/8/07	100
2/8/07	Dist/GC	2/15/07	100
2/15/07	Equilibrium	2/22/07	100
2/22/07	Stannic Iodide	3/1/07	100
3/1/07	Test No. 1 through SnI_4		125
3/15/07	F.P. Depress	3/22/07	125
3/22/07	Acids, Bases, Buffers	3/29/07	100
3/29/07	Titration curve	4/5/07	125
4/5/07	Qual analysis	4/12/07	100
4/12/07	Electrochemistry	4/19/07	100
4/19/07	Nuclear Chem	4/26/07	100
4/26/07	Test No. 2 Check-out		125
			Total 1600