

GENERAL CHEMISTRY LAB  
CHE 120L-018 Fall 2007

Thursday 1:40-4:40 p.m. SC-422

Instructor: Gwen Fields

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Office Hours: M 11-12:00, R 8:15-9:15 a.m.

Co/Pre REQUISITE General Chemistry I Lecture

A C or better is required in this course to enter CHE 121L

REQUIRED MATERIALS

1) Lab record book, Hayden McNeil Publishing

2) Safety goggles

3) Calculator- NOT graphics or programmable

Suggested models: Casio fx- ( 300SA-w, 115S-w, or 250HC-s), Sharp EL (506L or 509LH) or TI (34, 30Xa, or 36X)

4) General Chemistry Lab Manual

\*\*\* If you withdraw at any time from either the lecture or the lab, you must also withdraw from the other as they are corequisites. If you withdraw yourself from one and not the other, the chemistry will withdraw you from both. \*\*\*

**TENTATIVE SCHEDULE**

<u>DATE</u>	<u>EXPERIMENT</u>	<u>DUE DATE</u>
8/23	Check-in, Intro Msmnts.	8/23
8/30	Chromatography	9/6
9/6	Laboratory Measurements	9/13
9/13	Chem. and Phys. Properties	9/20
9/20	Zinc Iodide	9/27
9/27	Alum	10/4
10/4	Chemical Reactions	10/11
10/11	MIDTERM EXAM (Safety thru Chem Rxns)	
10/18	Synthesis of Alum (FI and FD)	10/25
10/25	Calorimetry and Hess's Law	11/1
11/1	Cycle of Copper	11/8
11/8	Absorp. Spectroscopy	11/15
11/15	Titration of Bleach (FI and FD)	11/29
11/22	Thanksgiving Break - No Class	
11/29	Lewis Structures / VSEPR	12/6
12/6	Final Exam (Copper thru Lewis)	

FI and FD are formal introductions and discussions.

## **GRADING**

Safety Quiz - 50 points

Intro. To Measurements - 25

All other Experiments- 75 points each

2 EXAMS- 100 points each (30 points practical, 70 points written)

Formal Introductions and Discussions- 100 points

TOTAL POINTS- 1275

Labs = 76% of final grade

Exams = 16 % of final grade

Formal Reports = 8% of final grade

90 - 100 % A

80 - 89 % B

70 - 79 % C

60 - 69 % D

0 - 59 % F

## **Student Learning Outcomes**

- 1.Explain the major concepts and experimental findings in the chemical sciences.
- 2.Demonstrate the ability to carry out experimental protocols using modern instrumentation and methods.
- 3.Utilize critical thinking skills to apply concept knowledge and adapt experimental techniques to: a) form and test hypotheses and b) solve scientific problems
- 4.Compile, critically evaluate, and interpret scientific information and data.
- 5.Effectively communicate scientific information through written and oral means.
- 6.Apply effective group strategies to solve scientific problems.

## **LABORATORY NOTEBOOK**

The lab record book is required for all experiments with the exception of the VSEPR lab on 11/29. **No manual pages should be used during a lab period** unless indicated by the instructor. Prior to entering the lab, 1) the notebook should contain the title thru protocol, and these sections should be initialed by the instructor before beginning the experiment 2) the prelab questions should be completed and ready to turn in.

The format for the lab notebook write-up is on p. iii of the lab manual.

A complete notebook entry for each experiment must have:

Title (2pts) of the experiment - at top of a new page

Objective (3pts) of the experiment (why you are doing the experiment)

Reagents (5pts) properties and safety concerns. The overall reaction, where applicable.  
Protocol (10pts) written in numbered fashion on left column of the record book  
Data and Observations (25pts) actual steps done; written in right column along side of protocol. List any amounts of reagents used and anything you see, hear, or smell (in relation to the experiment)

Calculations(10pts) for each new calculation done, one example should be done showing the formula used and how the data was "plugged-in" to the equation. The answers should always be recorded to the correct number of sig. figs. These go in your lab notebook.

The TOP copy of Title thru Data and Observations must be initialed by the instructor and the student and turned in prior to leaving the lab for the day. The white copy of the calculations may be turned in the next lab period with any corresponding data and/or question sheets. The remaining 45 points for the experiment will be divided appropriately among any data sheets from the lab supplement, pre and post-lab questions, and correct answer (identity of an unknown, % error, % recovery, etc.) Reports are due at the beginning of period following completion of lab. Late reports will incur a penalty of 2 points per week day. The last day to turn in any material to be graded is 12/6/06.

#### ATTENDANCE POLICY

There will be a maximum of two make-up labs for the semester. In order to have permission to make-up a lab, the instructor must be contacted by phone, or with an e-mail containing your phone number, within 24 hours of the start of the scheduled lab time. You MUST talk directly to the instructor, not just leave a message. If you do not hear back from me by 6 p.m. on the day of the missed lab, assume that I did not receive your message and leave another. You must schedule a new lab time with your instructor and the instructor with whom you will be making up the experiment. Upon contacting your instructor you will be notified of other days and times that are available for you to attend. Do not show up the week after the missed experiment and expect to do a make-up: it will not be granted! The missed lab must be made up within one week of the missed lab, and the report will be turned in on your next scheduled lab session. There will be no lab work made up after 12/5/06.

Any absences beyond the 2 make-ups will receive a zero for the experiment.

#### FORMAL LAB REPORTS

In addition to the weekly reports, you will be required to do 2 Formal Introductions and 2 Formal Discussions over the semester. Each of these will be worth 25 points. The Formal Introductions are designated by (FI) on the schedule and the Formal Discussions are designated by (FD) on the schedule. The format for these formal reports can be found on p. xviii in the lab manual. They will be due at the beginning of the lab period after the period in which the experiment has been completed.

Honor Code: Students are expected to conform to the Student Honor Code (<http://www.nku.edu/~deanstudents/HonorCode.htm> ). Cheating will not be tolerated. In accordance with the Code of Student Rights and Responsibilities, faculty members have the right to determine actions to be taken when a student is caught cheating

Faculty members reserve the right to dismiss or to have removed a disruptive student from their classrooms.

Students with disabilities who require accommodations (academic adjustments, auxiliary aids or services) for this course must register with the Disability Services Office. Please contact the Disability Service Office immediately in the University Center, Suite 320 or call 859-572-6373 for more information. Verification of your disability is required in the Disability Services Office for you to receive reasonable academic accommodations. Visit the Disability Services website at [www.nku.edu/~disability/](http://www.nku.edu/~disability/).

- Students are responsible for reading and understanding all items on the syllabi. Any items not understood must be brought to the attention of the instructor within the first two weeks of class.

**This syllabus is subject to change.**