

Course Syllabus General Chemistry I Laboratory CHE 120L - 022 Fall 2008

Course Day, Time and Room: Tuesday, 9:25 – 12:25, SC 426

Instructor: Dr. Laura Padolik

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Office Hours: M, W, F 10:00 - 11:50

Prerequisite: High school chemistry or equivalent

Corequisite: General Chemistry I Lecture

Required Text: Laboratory Manual for General Chemistry I (Sixth Edition)

Required Materials: Laboratory Record Book and Safety Goggles

Course Description Chemistry 120 lab is a class for science majors where the principles of chemistry; physical and chemical properties of elements and compounds will be investigated. This class meets the general education requirements in the natural sciences. This is a web enhanced course. Students need to earn a minimum grade of C in this class to continue in CHE 121 lab.

Preparation: Students are expected to come to lab with a thorough understanding of the principles involved in the experiment, the goals of the experiment and the procedures to be followed.

This requires you to:

- read the experiment ahead of time.
- complete your protocol.
- carry out any pre-lab exercises.
- check Blackboard before class to check for any announcements concerning the lab.

Blackboard: Students will be expected to use Blackboard to access information about class.

On Blackboard you will find:

- the course syllabus.
- a list of all experiments.
- links to the General Chemistry Website.
- links to the Learning Assistance Program and the NKU Honor Code.

Lab Record Book: The laboratory record book will be used to write a protocol for each experiment and to record changes and data collected in each experiment. See pages iii – vi in the lab manual.

Prior to each experiment the lab record book must contain:

- the title, date, and purpose of the experiment to be performed.
- all special safety precautions that must be observed while performing the experiment.
- the protocol-which is the list of steps that you will follow to perform the experiment.

After each experiment the lab record book must contain:

- a list of the steps actually carried out during the experiment.
- all data and observations collected during the experiment.

Copies of the protocol must be turned in after the completion of each lab. You should not use your lab manual while conducting the experiment.

Prelab Exercises: Many of the experiments have prelab exercises in the lab manual. These must be filled out before carrying out the experiment. Grading will be based on completion only. See the schedule.

Introductions: Two experiments require written introductions to be turned in before the lab experiment is carried out. See the schedule. An introduction describes the chemistry to be carried out in the experiment.

Lab Report: For most experiments the lab report consists of turning in completed pages from the lab manual.

For each report note:

- all pages should be neatly filled out.
- all data and calculations must be recorded to the proper number of significant figures.
- all data and calculations must have units associated with them.
- all answers to questions must be answered in sentence form with correct spelling and punctuation.
- all pages should be stapled in order.
- all work must be original (plagiarism is unacceptable).

Lab report pages may also be found on the General Chemistry Website. These pages may be filled in using the keyboard and/or printed out and filled in by hand.

Discussions: Two experiments require written discussions to be turned in with the lab report. See the schedule. The results of the experiment are analyzed in a discussion.

Due Dates: Due dates for all parts of the lab are as follows:

- the completed protocol in your lab record book is due before lab.
- the completed prelab or introduction (if required) is due before lab
- copies of all protocol pages should be turned in upon completion of the lab.
- reports are due at the beginning of the lab one week following completion of the lab.
- discussions (if required) are due with the lab report.
- late work will be subject to a 10% penalty per day.
- protocols are required to carry out the lab.

Lab reports later than one week will not be accepted.

Safety: All safety rules must be obeyed. Violation of these rules will result in dismissal from the lab and a grade of zero for that experiment. Safety rules are found in the lab manual on page vii. **No shorts or sandals are allowed in the laboratory.**

Exams: There will be two exams. See the schedule on the next page.

Attendance: If a student misses a laboratory experiment with an emergency excuse, a makeup lab may be scheduled by contacting the instructor within 2 weekdays of the missed lab. The lab must be made up within one week of the missed lab. The student must obtain permission from the makeup lab instructor. Two makeup labs will be permitted. Failure to follow this policy will generally result in a grade of zero for a missed lab. If a student misses a lab, it is his or her responsibility to turn in any lab reports on or before the due date to avoid losing points.

Grading: Points will be divided as follows:

- Safety & Lab Measurements 40 points
- Lab record book: protocols 25 points each
- Prelab exercises complete 5 points each
- Reports 55 points each
- Introductions, discussions 25 points each
- Exams 130 points each

Grading Scale:

A	≥ 90% of total points
B	80 – 89% of total points
C	70 – 79% of total points
D	60 – 69% of total points
F	< 60% of total points

TENTATIVE Schedule

Dates	Experiments	*Prelab	Report	Points
August 26	Check-In, Safety, Measurements			40
September 2	Laboratory Measurements (p. 67)	RB, PL p. 71-72	p. 73-76	85
September 9	Introduction to Chromatography (p. 59)	RB	p. 63-65	80
September 16	Chemical and Physical Properties (p. 93)	RB	p. 95-97	80
September 23	Empirical Formula of Zinc Iodide (p. 53)**	Intro, RB, PL (p.55)	p. 57-58**	135
September 30	Synthesis of Alum (p. 99)	RB	p. 103-104	80
October 7	Chemical Reactions (p. 33)	RB, PL (p. 37)	p. 39-44	85
October 14	Lab Exam 1			130
October 21	No Class			
October 28	Acid Base Titration (p. 9)**	RB, PL (p. 13)	p. 15-17**	135
November 4	No Class	RB, PL (p.27-28)	p. 29-32	
November 11	Absorption Spectroscopy (p. 1)	RB	p. 5-7	80
November 18	TBA	TBA	TBA	TBA
November 25	TBA	TBA	TBA	TBA
December 2	TBA	TBA	TBA	TBA
December 9	Lab Exam 2			130

*Due before starting lab. RB = record book (protocol), PL = prelab worksheet

**For these two experiments introductions and discussions will be written.

The titles and formats of the TBA experiments will be given in class and on the Blackboard website.

Other Important Course Information:

September 15 Last day to drop the course with an "X"
November 3 Last day to drop the course with a "W"

If you withdraw from the lecture class you will be withdrawn from the lab.

The work you will do in any course is subject to the Student Honor Code. The Honor Code is a commitment to the highest degree of ethical integrity in academic conduct, a commitment that, individually and collectively, the students of Northern Kentucky will not lie, cheat or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

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.

The Instructor reserves the right to modify the syllabus at any time during the semester.

Students are required to read and understand the contents of this syllabus. Any questions must be brought to the instructor's attention by September 3, 2008.

Department of Chemistry Student Learning Outcomes for General Chemistry I Laboratory

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. Compile, critically evaluate, and interpret scientific information and data.
4. Effectively communicate scientific information through written and oral means.
5. Apply effective group strategies to solve scientific problems.
6. Apply computer technology and other technologies in the comprehension, interpretation, and presentation of the chemical sciences.