

Course Syllabus General Chemistry I Laboratory CHE 120L - 021 Fall 2007

Course Day, Time and Room: Thursday 9:25 - 12:25, SC 426
Instructor: Dr. Laura Padolik
Office: SC 451 Phone: 859-572-6113 e-mail: padolikl@nku.edu
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 (Fifth Edition)
Required Materials: Laboratory Record Book and Safety Goggles

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 and carry out any pre-lab exercises, as noted in the schedule. You should also check Blackboard before class to check for any announcements concerning the lab.

Blackboard: Students will be expected to use Blackboard to receive announcements and any additional information about class. On Blackboard you can find links to Disability Services, 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. The protocol **must** be complete before you will be allowed to carry out the lab. You must be able to use your protocol alone to carry out the laboratory experiment. Copies of the protocol and data are to be handed in after the lab is complete. Each record book entry should contain the title, date and purpose of the experiment along with protocol and data. See pages iii-vi in the lab manual for more information about the lab record book and sample record book pages.

Lab Report: For most experiments the lab report consists of data sheets from the lab manual, calculations and answers to questions at the end of the experiment. All data and calculations must be recorded to the proper number of significant figures. All pages are to be written neatly and turned in stapled and in proper order. Five points per lab will be for neat and orderly lab reports. Lab report pages may also be found on the General Chemistry Website: http://www.nku.edu/~chemistry/general_chem/. These pages may be filled in using the keyboard and/or printed out and filled in by hand.

Introductions/Discussions: For The Empirical Formula of Zinc Iodide and A Cycle of Copper Reactions, a written introduction and discussion will also be required. The introductions will be due the week of the lab; and the discussions will be due one week after completion of the lab (along with the regular lab report). Information about introductions and discussions can be found on page xviii in the lab manual.

Due Dates: Protocols and prelaboratory exercises are due at the beginning of each lab period. Each lab report is due at the beginning of the lab period following completion of the experiment. Late work will be penalized 10% for each day late. If a student misses a lab, it is his or her responsibility to turn in the lab report on or before the due date to avoid losing points. **Lab reports later than one week will not be accepted.** Due dates are subject to change.

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.

Grading: Points will be divided as follows:

Safety & Lab Measurements	40 points	
Lab record book: protocols	25 points each	(275 points)
Prelab exercises complete	5 points each	(30 points)
Reports	55 points each	(660 points)
Introductions, discussions	25 points each	(100 points)
Exams	140 points each	(280 points)

Grading Scale:

A	≥ 1246 points (90% of total)
B	1108 – 1245 points
C	969 – 1107 points
D	831 – 968 points
F	less than 831 points

Important Dates:

September 10	Last day to drop the course with an "X"
October 29	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 1, 2007.

TENTATIVE Schedule

Dates	Experiments	*Prelab	Report	Points
August 23	Check-In, Safety, Measurements			40
August 30	An Introduction to Chromatography (p. 1)	RB	p. 5-7	80
September 6	Laboratory Measurements (p. 9)	RB, PL (p. 13-14)	p. 15-18	85
September 13	Chemical & Physical Properties (p. 19)	RB	p. 21-23	80
September 20	The Empirical Formula of Zinc Iodide (p. 25)**	Intro, RB, PL (p. 27)	p. 29-30**	135
September 27	Chemical Reactions (p. 31)	RB, PL (p. 35)	p. 37-41	85
October 4	Titration (p. 43)	RB, PL (p.47)	p. 49-51	85
October 11	Lab Exam 1			140
October 18	Synthesis of Alum (p. 53)	RB	p. 57-58	80
October 25	Calorimetry and Hess's Law (p. 59)	RB, PL (p. 67-68)	p. 69-72	85
November 1	A Cycle of Copper Reactions (p. 73)**	Intro, RB, PL (p.77)	p.79-80**	135
November 8	Absorption Spectroscopy (p. 81)	RB	p. 85-86	80
November 15	Titration of a Bleach Solution (p. 87)	RB	p. 91-92	80
November 22	No Class			
November 29	Lewis Formulas ... (p. 93)		p.99-107	55
December 6	Lab Exam 2			140

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

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

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.