

General Chemistry Lab (1.5 Credits) CHEM 113, Fall Term, 2013

Course Description:

Covers chemical and physical properties and techniques for inorganic, and organic compounds, including sublimation, crystallization, and separation.

Objectives for CHEM 113

- Develop the skills and understanding needed to measure physical properties such as the density and molar mass of pure substances.
- Develop an understanding of spectroscopy and of its use for measuring concentrations of solutions.
- Develop the skills and understanding needed to measure the stoichiometry of a reaction using gravimetric analysis, determine equilibrium constants by pH measurement, and heats of reaction by calorimetry.
- Develop an understanding of basic techniques for chemical synthesis and purification.
- Develop a basic understanding of the behavior of gases by measuring the influence pressure on gas volume.

Instructors:

Coordinator: Dr. Daniel Kleier
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Office hours: ???

Lab : Elsa Gorre
Office: Disque 605
Section 001 on Thursday at 9:30 AM
Tel: 215-895-2654
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Office hours: ???

Lab: Mr. Wenjian (Vince) Du
Disque 415
Section 060 on Tues. @ 4:00 PM
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Office Hours: ???

Course Website:

You will always find the most current syllabus (supersedes this version), course schedule and announcements at the Blackboard Learn (BBL) site for the course. **Check it regularly.** You can get there through DrexelOne ("My Courses") or directly by typing the <https://learn.dcollege.net> into your browser.

Required Materials:

Textbook: "Experiments in General Chemistry Laboratory Manual" by Sally Solomon and Susan Rutkowsky - Wiley Custom Services

Personal Protective Equipment: Safety glasses and a lab coat. Both must be worn whenever you are in the lab. Contact lenses are not to be worn in the lab. You may not wear shorts or opened toe shoes. Feet must be covered.

Grading policy:

Activity	% Grade	Additional Information
Lab Reports	100	Your final lab grade will be calculated based upon the best 9 out of 10 lab grades. A missed lab counts as a zero. Therefore, missing 2 or more labs will result in a much lower grade. Missing 4 or more labs, will result in failure of the entire course. See section below on Lab Report Grading Policy for more details.
Total	100	

Students who meet all the requirements will earn letter grades according to the following mapping of numeric grades to letter grades.

97 - 100 → A ⁺	87 - 90 → B ⁺	77 - 80 → C ⁺	67 - 70 → D ⁺
93 - 97 → A	83 - 87 → B	73 - 77 → C	60 - 67 → D
90 - 93 → A ⁻	80 - 83 → B ⁻	70 - 73 → C ⁻	< 60 → F

Laboratory Assignments:

You will have a chemistry lab every week. Lab attendance is required. The grading formula used for the course makes accommodations for one missed lab by dropping your lowest lab grade. There will be no makeup labs except under extreme conditions, and even then the makeup labs may need to be performed in another quarter.

Unless otherwise indicated, your lab report should be submitted to your instructor one week following the day on which the lab was performed. Every week the instructor is to sign or initial your data sheets for the data collected that day. The signed data sheet must be included with your report along with any other required documents such as graphs or sample calculations.

Lab Report Grading Policy: Your grade for a given lab will be calculated based upon attendance, lab performance, and the quality of the lab report. Roughly 50% of the grade will be based on attendance, adherence to safety rules and experimental procedures, and practicing good housekeeping. The other 50% of your grade will be based upon the data, calculations, graphs, and responses to questions that are presented in your report.

10% will be deducted for each week the report is late. All reports must be in by the last lab period of the term.

Percentage grades for the reports will be transcribed to the BBLearn grade center.

Academic Honesty / Cheating: Students are held to the highest expectations and standards regarding honesty in all aspects of the course, including taking exams and in the preparation of laboratory reports. Cheating, **including misrepresentation of the work of others as your own**, will not be tolerated. **(Understand plagiarism and do not commit it.)** Cases of cheating will be reported to the University and the College of Arts and Sciences. Students caught cheating will receive a failing (F) grade. More information on the "Academic Dishonesty" policy is provided by the provost's office at:

http://www.drexel.edu/provost/policies/academic_dishonesty.asp

Disability Services: Students with disabilities who wish to request accommodations and services at Drexel University need to present a current accommodation verification letter ("AVL") to the instructor before accommodations can be made. AVL's are issued by the Office of Disability Resources ("ODR"); <http://www.drexel.edu/oed/disabilityResources/students/>

Course drops or withdrawals

For the latest course drop and withdrawal policy check the following documents: http://www.drexel.edu/provost/policies/course_drop.asp and http://www.drexel.edu/provost/policies/pdf/course_withdrawal.pdf

Course Drop Policy:

Courses may only be dropped during the "drop period" lasting from the beginning of the enrollment period through the end of the second week of the quarter. Dropping a course results in the course being removed from the student's academic record without a "W" appearing on the transcript—specifically, neither the course nor the grade of "W" appears on the student's transcript. Freshmen and new first-term transfer students must meet with their academic advisors to drop courses during the first quarter. Undergraduate upper-class and graduate students may use BannerWeb to drop courses; no approvals are required for upper-class and graduate students.

Course Withdrawal Policy:

For students on the quarter system, the withdrawal period lasts from the beginning of the third week through the end of the seventh week of the term. Specifically, withdrawal from a course taken on the quarter system must be executed by close of the business day on the Friday of the seventh week of the term.

Before withdrawing from a course, students should consult with the instructor. All students must obtain their advisor's written authorization before withdrawing from courses. Written authorization is obtained once the instructor has signed the "ENROLL/WITHDRAW" form.

Laboratory Schedule

Week	Lab Title(s)	Pages in Text	Date Lab Report Due	
			Sect. 060	Sect. 001
1	Density and Thickness of Al Foil	15-17 & Handout	10/1/13	10/3/13
2	Boyle's Law and Distillation Demo	19 - 22	10/8/13	10/10/13
3	Beer's Law, Cobalt Chloride and Polymer Demo	43 - 46	10/15/13	10/17/13
4	Pentamineaquacobalt(III) sulfate	107-111	10/22/13	10/24/13
5	Phosphorous in Plant Food	113-115	10/29/13	10/31/13
6	Determination of Molar Mass of Alcohols	Handout	11/5/13	11/7/13
7	Titration of HCl & Acetic Acid	59 - 65 & Handout	11/12/13	11/14/13
8	Heat of Neutralization	27 - 34	11/19/13	11/21/13
9	Comparing Food Dyes by Chromatography & Equilibrium	35 - 41 51 - 54	12/3/13	12/5/13
10	No Class			
11	Water of Hydration & Voltaic Cells	147 - 149 73 - 76	12/3/13	12/5/13