Chemistry 125
Experimental Chemistry I
Indiana University Northwest

TEXTBOOK: "Experimental Chemistry 1", Linda Wozniewski 2011

Also required 1) "Working Safely with Chemicals in the Laboratory", 2nd ed, Hugh B. Kareful, 1994
2) A laboratory notebook

GRADING:

Mid Term Exam	225 Points
Final Exam	450 Points
Lab Reports	1200 Points
Total	1875 Points

The mid -term exam is scheduled for March 2nd, 3rd and will contain material from the first six labs + safety. The Final Exam is scheduled for April 27th, 28th and will contain material from all twelve labs + safety. The lowest lab grade will be dropped.

LAB REPORTS: Nine of the experiments will require a full-length write- up and will be worth 100 points each. The formal write-up will consist of:

I. Title page: Title of experiment, name, partner's name and date performed
II. Abstract: One paragraph indicating what was done, how it was done and the final results
III. Introduction: Purpose of the experiment and relevant background. End with a purpose statement
IV. Procedure.
V. Experimental Details: (Pages from Hall Book)
VI. Results: Data, Calculations, and observations & Assigned questions
VII. Discussion: Final analysis of the experiment
VIII. Conclusion: RERUN

Formal write-ups must be word-processed and are due 1 week from the completion of the experiment. See the Chemistry/Physics Style Guide for further instructions. Late Lab reports will be accepted with a 10% reduction in grade.

The other four assignments will involve homework, but not a formal lab report. They are also worth 100 points each.

LAB POLICY: You should read the scheduled experiment before class and be prepared to ask questions about any information or procedures that you do not understand. Lab time is limited to the designated hours. Students must keep a permanent record of their data in a numbered, bound laboratory notebook. The data should be entered in ink. A carbon copy of the data from each experiment must be submitted upon the completion of each experiment. Do not tear out any of the original numbered sheets. There will be no make up time for missed labs. One missed lab may count as a dropped lab. After that all labs will receive a grade of zero. Students are responsible for all material on labs they have missed.

SAFETY: Safety is a primary concern in this course. Make sure that you have read and understand the safety rules written in your lab text and that you understand the safety rules written in your lab text and that you understand any safety rules or guidelines given by your instructor. Safety glasses, closed toed footwear and long sleeved shirt that covers the midriff and pants or skirt that come to the ankles must be worn at all times while in the laboratory. Long hair must be pulled back and dangling jewelry must be removed. No loose, dangling scarves or clothing is allowed. Be

informed about the hazards involved in each experiment. Use the fume hoods for all volatile compounds. Avoid skin contact with chemicals. Know what procedure to follow if you spill a chemical on your skin. Do not inhale fumes or directly smell chemicals. Dispose of excess chemicals or chemical waste in the correct manner. Always check with the instructor if you are unsure about the correct means of disposal. Students must turn in the safety consent form before beginning any experiments.

EQUIPMENT: Each student will be issued a drawer with a set of equipment. You will be charged for lost equipment broken or lost after check-in has been completed. A $10.00 fee will be charged to students who do not check out their drawer at the end of the semester or on withdrawal from the course. Each student will be required to bring their own safety glasses, two lint free towels and liquid dish soap. A lab coat is optional.

WITHDRAWAL POLICY: A student may withdraw at any time through Sunday March 13 without the consent of the instructor and receive the grade of W. Any student who decides to drop the course must fill out a withdrawal form or they will receive the grade of an F. Students must be currently or previously enrolled in C105, The Principles of Chemistry I, lecture. A student withdrawing from the C105 lecture must also withdraw from the C125 lab. After March 15, a student may withdraw only with the permission of his or her Dean. The approval is given only for urgent reasons related to extended illness or equivalent distress. To then qualify for a grade of W, a student must be passing the course on the day of withdrawal. If the student is failing, the grade recorded on the withdrawal date will be an F. This paragraph is University policy. Please make sure you understand this paragraph since no exceptions can be made.

COURSE OBJECTIVES: As an integral part of an ACS approved Core program, the C125 laboratory seeks to help fulfill the following ACS guidelines:

- Keep legible and complete experimental records;
- Synthesize and characterize inorganic compounds;
- Perform accurate and precise quantitative measurements;
- Interpret experimental results and draw reasonable conclusions;
- Anticipate, recognize, and respond properly to hazards of chemical manipulations;
- Communicate effectively through written reports;
- Work effectively in small groups and teams;
- Understand the distinction between qualitative and quantitative goals of determinations;
- Understand basic concepts of stoichiometry and basic chemical reactions involving analytes and ordinary reagents;
- Understand the properties, physical properties, acid-base character, and reactivities of the main group and transition elements;
- Understand periodic trends, oxoacids, metallic character of elements, properties of main group and transition oxides and hallids;
- Understand VSEPR concepts;
- Demonstrate the ability to identify and explain how scientific theories are formulated, tested, and validated.
- Demonstrate the ability to integrate and apply scientific methods which include defining parameters of problem, seeking relevant information, subjecting proposed solutions to rigorous testing, and drawing conclusions based on the process.

RIGHT TO ACCOMMODATION FOR INDIVIDUALS WITH DISABILITIES

Indiana University is committed to creating a learning environment and academic community that promotes educational opportunities for all individuals, including those with disabilities. Course directors are asked to make reasonable accommodations, upon request by the student or the university, for such disabilities. It is the responsibility of students with documented physical or learning disabilities seeking accommodation to notify their course directors and the relevant campus office that deals with such cases

in a timely manner concerning the need for such accommodation. Indiana University will make reasonable accommodations for access to programs, services, and facilities as outlined by applicable state and federal laws.
Campus support office: Davetta Haywood, Disabilities Coordinator, Hawthorn 237, 219-980-6942 Student Support Services
www.iun.edu/~supportn

Date	W	R	TOPIC	Pages	
January	13	14	Check in, Safety, Introduction, Math	3-64	S
	20	21	Density of Liquids & Solids	65-72	S
	27	28	Scientific Method	73-88	S
February	3	4	Getting Acquainted with Metals	89-98	L
	10	11	Synthesis of Binary Metal Compounds	99-108	L
	17	18	VSEPR	109-120	S
	24	25	Stoichiometry	121-126	L
March	2	3	Mid Term		
	9	10	Chemical Reactions & Their Classifications	127-136	L
	13	13	Automatic Withdrawal		
	23	24	Copper Reactions, Conservation of Matter	137-146	L
	30	31	Hess's Law	149-160	L
April	6	7	Diffusion	161-168	LI
	13	14	Separating the Components of a Mixture & Aqueous solutions	169-184	L
	20	21	Colligative Properties, Checkout	185-199	L
	27	28	Final Exam	All Labs	