Laboratory Overview

Chemistry is an experimental science. Your laboratory experience will provide a hands-on introduction to basic measuring and manipulative skills, develop your powers of observation and instill a habit of documenting your observations in written form. But most important, the purpose of the laboratory is to encourage you to draw connections between the experimental and the conceptual foundations of the science of chemistry.

Safety

Safety is Job One in the laboratory. You will be working with potentially toxic chemicals using potentially dangerous operations. You are required to follow the guidelines written in the Rules and Safety Procedures which each of you must sign. You must wear approved safety goggles at all times unless the requirement is waived for the entire class. You will be instructed as to the locations of fire extinguishers, first aid kit, alternative exits, and other safety features. You must never perform an unauthorized experiment.

The Laboratory Report

A report is required for each experiment. The **Report Form** is a fill-in-the-blank sheet which will be provided. All collected data must be entered **directly onto the Report Form**. All data must be entered in **ink**. Each report must be **dated** and **signed** by the student and **co-signed** by another student or the instructor. The report will generally be turned in at the end of the lab period but will be due within 7 days at the latest.

Tentative Schedule of Experiments

Week of	Monday	Wednesday
8/24	Check-in; Safety video; safety quiz	1x. Mass, volume, density
8/31	Measurement (cont'd)	GROUP-X: Nomenclature
9/7	HOLIDAY – No class	15. Line emission spectra
9/14	2. Unknown liquid	GROUP-X: Lewis octet structures
9/21	9. Double displacement.	GROUP-X: Double displacement
9/28	10. Single replacement.	GROUP-X: Redox reactions
10/5	5. Decomposition of NaHCO3	11. Formula of MgOx
10/12	7. Specific heat of a metal	6A. Heat of combustion
10/19	6B. Heat of a phase change	To be determined
10/26	6,7. Makeup as needed	12x. Molar mass using PV = nRT
11/2	GROUP-X: Gas law problems	21. Solubility/molecular structure
11/9	22. Concentration of solutions	HOLIDAY – No class
11/16	GROUP-X: concentrations/dilutions	24. Finding pH of solutions
11/23	GROUP-X: Acid-base reactions	To be determined
11/30	25. Titration of vinegar (REQUIRED)	GROUP-X: nuclear chemistry
12/7	Lab practical/checkout	GROUP-X: organic chemistry
12/14	All assignments are due	Aloha and mahalo nui!

Group exercises (GROUP-X) are just that: peer learning/teaching opportunities.