CHEM 103 L General Chemistry Laboratory

This course is an application of the general chemistry concepts studied in CHEM 103. The student carries out experiments including chemical equilibria, solutions, titrations. Upon completion of the course the student will have gained a strong foundation for the further study of chemistry, and for the application of chemical principles in a variety of other fields. *(Pre-requisites).*

Course Learning Outcomes:

By the end of the course, students will be able to:

1. Gain improved understanding of basic concepts behind significant numbers, error analysis involving taking measurements, oxidation-reductions reactions, standardization and calibration processes and equilibrium concepts
2. Carry out chemical calculations, including mass relations in chemical reactions, limiting reagent and reaction yield calculations, and calculations involving reactions taking place in solution.
3. Understand and apply the chemistry concepts in other fields to solve hands-on and practical problems. Conduct appropriate experimentation, analyze and interpret data, and use scientific judgment to draw conclusions.
4. Need to keep very organized and inclusive notes in a logbook and any knowledge related to the experiments while doing the experiments and the analysis afterwards.
5. Learn how to work in teams while carrying out scientific experiments.
6. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment. And conduct some simple chemistry experiments.

Textbook & Course Materials:

- R. Chang and K. Goldsby, "Chemistry" 13th edition.

Course Content:

1. Mass & Volume Measurements
2. Nomenclature & Naming Compounds
3. Standardization of NaOH
4. Cobalt Chloride and La Chatelier's Principle