



MONROE COUNTY
COMMUNITY COLLEGE

Course Outcome Summary

Standard Course

CHEM 152 General College Chemistry II

Course Information

Division	Science/Mathematics
Contact Hours	90
Lecture Hours	45
Lab Hours	45
Total Credits	4

Prerequisites **CHEM 151**

Course Description

A continuation of Chemistry 151 which includes obtaining and applying quantitative information in laboratory to the fundamental interrelationships among molecular bonding, solution chemistry, solids, chemical kinetics, chemical equilibria, acids bases buffers, chemical thermodynamics, and electrochemistry. Course requires laboratory work.

Course Outcomes

In order to evidence success in this course, students will be able to:

1. Explain and employ the VSEPR Theory, Valence Bond Theory, and Molecular Orbital Theory.
2. Explain intramolecular and intermolecular bonding.
3. Calculate the energetics of phase changes.
4. Define the structure and properties of molecular solids, ionic solids, and atomic solids.
5. Calculate changes in conditions for solutions.
6. Predict and graph the kinetics of a chemical system using laboratory observations, rate laws, rate constants, and reaction mechanisms.
7. Express equilibrium constants in terms of concentration or pressure.
8. Calculate and make predictions of a chemical system at equilibrium when reaction conditions are changed.
9. Apply the concepts and perform calculations of acids, bases, buffers, and the pH scale.
10. Predict the tendency for change in a chemical system based on the thermodynamic properties of the system.
11. Apply the concepts of electrochemistry to make predictions about a chemical system in a voltaic or an electrolytic cell.
12. Utilize analytical laboratory techniques to obtain quantitative information about chemical systems.
13. Utilize the quantitative information from the laboratory to develop useful relationships with respect to chemical systems.

Date Updated: September 11, 2018
By: L. Bean