**Department of Chemistry Syllabus**

This syllabi is advisory only. For details on a particular instructor's syllabus (including books), consult the instructor's course page. For a list of what courses are being taught each quarter, refer to the Courses page. *Every instructor has prerogative to teach the course as they see fit and ultimately the instructor's syllabus supersedes all others.*

***CHE 2B: General Chemistry***

Approved:

**Suggested Textbook: (actual textbook varies by instructor; check your instructor)**

Chemical Principles, 8th Edition, Zumdahl & DeCoste, Cengage Learning, ISBN 978-1-305-58198-2

**Suggested Schedule:**

|  |
| --- |
| **Zumdahl Chapter/Topic** |
| 9: Energy, Enthalpy, & Thermochemistry |
| 10: Spontaneity, Entropy, & Free Energy |
| 16: Liquids & Solids |
| 17: Properties of Solutions |
| 6: Chemical Equilibrium |
| 7: Acids & Bases |
| 8: Applications of Aqueous Equilibria |

**Additional Notes:**

**Learning Goals:**

Course Goals & Objectives.

* Ability to integrate concepts/equations and apply them to chemical problems associated with the topics covered.
* Understand and solve chemical problems of chemical equilibrium as it relates to Le Chatelier’s principle, acid/base chemistry, buffers, titrations, solubility, and precipitation.
* Basic understanding of thermodynamic quantities and thermodynamics as it relates to equilibrium.
* Knowledge of thermochemistry and ability to apply knowledge to various calorimetry problems.
* General knowledge of the solid, liquid, and gas phases, phase changes, and intermolecular forces.
* Understand the aspects of solutions including concentration, polarity, solubility, vapor pressure, and colligative properties.
* Ability to apply acid/base theories and behaviors to conceptual problems and calculations.
* Connect the topics to application in daily life situations.