**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 2A: 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:**

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| --- |
| **Zumdahl Chapter/Topic** |
| 2: Atoms, Molecules, & Ions |
| 3: Stoichiometry |
| 4: Chemical Reactions & Solution Stoichiometry |
| 5: Gases |
| 12: Quantum Mechanics & Atomic Theory |
| 13: Bonding – General Concepts |
| 14: Covalent Bonding – Orbitals |

**Additional Notes:**

**Learning Goals:**

Course Goals & Objectives.

* Mastery with SI units, conversions, scientific notation, and algebraic mathematics.
* Ability to integrate concepts/equations and apply them to chemical problems associated with the topics covered.
* Understand chemical bonding as it relates to structures, hybridization, and various bonding theories.
* Ability to read, understand, and interpret the periodic table and related electronic, physical, and chemical trends.
* Basic understanding the electron and the atom as it relates to structure and quantum mechanics.
* Knowledge of the kinetic theory of gases and use of the various gas laws.
* Ability to solve chemical problems of solutions involving aqueous reactions, stoichiometry, and dilutions.