

COLLEGEWIDE COURSE OUTLINE OF RECORD

CHM 061, BASIC CHEMISTRY

COURSE TITLE: Basic Chemistry

COURSE NUMBER: CHM 061

PREREQUISITES: Demonstrated competency through appropriate assessment or earning a grade "C" or better in ENG 032, Reading Strategies for College II and MAT 050, Basic Algebra

DIVISION: General Education

PROGRAM: Academic Skills Advancement

CREDIT HOURS: 3

CONTACT HOURS: Lecture: 2 Lab. 2

DATE OF LAST REVISION: Fall, 2003

EFFECTIVE DATE OF THIS REVISION: Fall, 2004

CATALOG DESCRIPTION: Provides students with an introduction to chemistry basics. Provides instruction for students with little or no recent chemistry background, especially those desiring to continue in more advanced chemistry courses or other science courses.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Perform conversions and make approximations using the metric system.
2. Solve problems using scientific notation.
3. Solve problems using the factor-labeling method.
4. Determine known and unknown, pertinent and impertinent quantities in a word problem.
5. Make measurements and perform calculations which reflect an instrument's precision (significant figures).
6. Describe the fundamental properties of electrons, neutrons, and protons.
7. Describe basic atomic models.
8. Identify the symbol and draw atomic and Lewis Dot structures of the first 20 elements.
9. Describe the layout of the periodic table.
10. Draw Lewis Dot and stick structures of simple ionic and covalent compounds.
11. State the name of simple chemical compounds and vice-versa.
12. Balance simple chemical equations.
13. Calculate the molecular weight of a substance.
14. Discuss the significance of Avogadro's number.
15. Convert between molecules and moles of a substance.
16. Convert between grams and moles of a substance.

COURSE CONTENT: Topical areas of study include -

Matter, changes and energy
Structure of matter
Chemical bonds
Scientific notation

Measurements and conversions
Periodic nature of the elements
The mole and quantitative relationships
Naming of compounds

Chemical reactions
Lewis dot symbols

Gaseous state of matter
Atomic models
Electrons, protons, and neutrons

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

ADA STATEMENT:

Ivy Tech State College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.