

TEXTBOOK: "General Chemistry: The Essential Concepts" by Raymond Chang and Jason Overby, 6th edition (2011), McGraw-Hill, New York.

LAB MANUAL: "Classic Experiments in Modern College Chemistry I", by Douglas Cody, Charles Hicks, and Leonard Itzkowitz 2nd Edition (2011), Whittier, NY

SAFETY EQUIPMENT: Laboratory Coat and Goggles

DESCRIPTION: This course may be applied toward satisfaction of the college laboratory science requirement. The course covers fundamental principles of modern chemistry including problem-solving techniques. Topics include atomic and molecular structure, chemical nomenclature, stoichiometry, periodic table, chemical bonding, properties of gases, liquids and solids, and solutions. One year of high school chemistry and a working knowledge of elementary mathematics including algebra is strongly suggested.

OVERVIEW: The study of chemistry requires that one thoroughly master the material presented each day in order to understand what will be taught on the next day. It is therefore important that the readings and problems assigned by your instructor be completed before the next class.

This course is the first half of the General Chemistry sequence and provides fundamental knowledge that is essential to your success in the second half sequence of General Chemistry (CHE 132). Topics of special importance include:

- The development of sound problem-solving techniques.
- An understanding of atomic structure and molecular bonding, including the ability to draw Lewis structures.
- The ability to write chemical formulas and name chemical compounds.
- The ability to write balanced equations (including net ionic equations) and carry out stoichiometry calculations based on these equations.
- A thorough understanding of the mole concept, including molarity and solution calculations.

COURSE GRADE/ATTENDANCE: Participation in the lecture and laboratory portions of the course is mandatory. A passing grade (60%) is required for BOTH the lecture and laboratory in order to receive credit for the course.

SPECIAL NEEDS: "If you have a physical, psychological, medical or learning disability that may impact your ability to carry out assigned coursework, I would urge that you contact the staff in The Center for Students with Disabilities (CSD) in Building "U", 572-7241, TTY 572-7617. CSD will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation is confidential."

Bring a calculator and periodic table to every class.

NASSAU COMMUNITY COLLEGE
Department of Chemistry

**DEPARTMENTAL POLICY CONCERNING SAFETY EQUIPMENT IN THE
LABORATORY**

All students and faculty are required to use the following protective equipment when working in the chemistry laboratory:

I. PROTECTIVE EYEWEAR:

Individuals working in a laboratory environment must wear **chemical splash goggles** that include:

1. An optically clear lens, which meets ANSI Z87.1, impact requirements and has anti-fog coating.
2. **INDIRECT AIR VENTS** designed to restrict the entry of liquids and small particles.

Individuals who normally wear prescription glasses must:

1. Wear the splash goggle described above over their prescription glasses. **OR**
2. Wear prescription glasses equipped with frames having SIDE, TOP and BOTTOM splash protection. Lenses must meet ANSI Z87.1 impact requirements.
3. Contact lenses are not recommended in a laboratory environment. The splash protection goggle described above **MUST** be worn with contact lenses.

II. PROTECTIVE CLOTHING:

1. Individuals working in a laboratory environment are required to wear a **laboratory coat** (with front closure) that is long enough to provide approximately knee-length protection.

BE ADVISED: There is some evidence that protective clothing made of 65% Dacron polyester/35% cotton may increase the severity of burn injury if the garment should catch fire. We therefore strongly recommend the use of cloth protective garments made of 100% cotton rather than a polyester/cotton mix.

2. Outerwear such as coats, jackets, sweatshirts, or sweaters **DO NOT** meet this requirement.
3. Shorts, open-toed shoes, and sandals are **NOT** permitted.