



COURSE SYLLABUS

PO Box 1189
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Hamlet, NC 28345
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COURSE: CHM 151 GENERAL CHEMISTRY I

HOURS: Lecture: 3 Lab/Shop: 3 Work Exp/Clinical: 0 Credits: 4

COURSE DESCRIPTION:

This course covers fundamental principles and laws of chemistry. Topics include measurement, atomic and molecular structure, periodicity, chemical reactions, chemical bonding, stoichiometry, thermochemistry, gas laws, and solutions. Upon completion, students should be able to demonstrate an understanding of fundamental chemical laws and concepts as needed in CHM 152.

Note: In accordance with the Comprehensive Articulation Agreement, this course has been approved to satisfy the Universal General Education Transfer Component requirement for natural sciences in A.A. and A.S. degree programs. This course has been approved to meet the natural sciences requirement in A.A.S. degree programs.

PREREQUISITE(S): NONE

COREQUISITE(S): MAT 143 OR MAT 152 OR MAT 171 OR MAT 271

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:

Open Educational Resources (OER) are listed in the course Moodle.

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course, the student will be able to:

1. Apply the major steps of the scientific method for problem solving.
2. Solve problems relating to units of measurements.
3. Describe the nature of elements and their classification in the periodic table.
4. Write formulas for chemical compounds.
5. Predict products and balance chemical equations using appropriate oxidation states.
6. Recognize the various types of chemical reactions and make product predictions.
7. Make calculations based on stoichiometry.
8. Use concentration factors in solving chemical solutions problems.
9. Use thermodynamic concepts.
10. Identify factors which influence chemical reactivity, such as chemical bonding.
11. Use experimental techniques in the laboratory including, but not limited to taking proper measurements, and separation techniques.
12. Conduct laboratory tests including, but not limited to identification of ions, concentrations, pH, etc.
13. Perform calculations using metric and Standard International units as utilized in scientific laboratories worldwide.
14. Demonstrate active oral and written communication skills as well as select and use appropriate means and methods to communicate thoughts and ideas on chemical concepts.

*****Please refer to the online version of the Richmond Community College Program & Course Catalog and the Student Handbook for current academic and general information.**