



## COURSE SYLLABUS

PO Box 1189  
1042 W. Hamlet Avenue  
Hamlet, NC 28345  
(910) 410-1700  
www.richmondcc.edu

**COURSE:** CHM 251 ORGANIC CHEMISTRY I

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

### COURSE DESCRIPTION:

This course provides a systematic study of the theories, principles, and techniques of organic chemistry. Topics include nomenclature, structure, properties, reactions, and mechanisms of hydrocarbons, alkyl halides, alcohols, and ethers; further topics include isomerization, stereochemistry, and spectroscopy. Upon completion, students should be able to demonstrate an understanding of the fundamental concepts of covered organic topics as needed in CHM 252.

*Note: In accordance with the Comprehensive Articulation Agreement, this course has been approved to satisfy the pre-major/elective requirement in A.A. and A.S. degree programs.*

**PREREQUISITE(S):** CHM 152

**COREQUISITE(S):** None

### 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. Define the role organic compounds play in day-to-day life.
2. Diagram molecules using models and modeling software.
3. Explain details about the molecular structure of compounds, how they are formed or degraded.
4. Develop a compressive understanding of the theories that determine how molecules interact and combine.
5. Describe the shapes of various organic molecules, and how chemists determine these shapes.
6. Use correct nomenclature for all organic compounds discussed.
7. Demonstrate an understanding of common organic reaction mechanisms; nucleophilic addition, the formation of C-C bonds, nucleophilic substitution.
8. Demonstrate an understanding of mechanisms involving elimination reactions and electrophilic addition.
9. Develop organic synthesis, separation, and characterization laboratory methods.

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