

**PENSACOLA JUNIOR COLLEGE
DISTRICT COURSE SYLLABUS**

**ORGANIC CHEMISTRY I
CHM2210**

Credit Hours: 3 college credit hours

Contact Hours: 3 lecture hours per week

Laboratory Fee: No

Prerequisites: CHM1045 General Chemistry I, CHM1046 General Chemistry II

Corequisites: CHM2210L Organic Chemistry Laboratory

Catalog Description: A study of carbon compounds with emphasis placed on reaction mechanisms, functional group behavior, synthesis, and structure determination.

Required Textbook(s): Organic Chemistry by Paula Bruice, 4th Edition. Pearson (Prentice Hall) Publisher

Supplemental Materials: Additional material may be assigned by an instructor to supplement the required textbooks.

Special Requirements: None

Major Learning Outcomes: At the end of the course the student will have a general understanding of the nature of organic compounds, discuss their structure, and will be able to describe the chemical reactions such compounds undergo.

Specific Performance Objectives:

1. Describe the Electronic configuration, Lewis Structures, and Molecular Shape of Carbon Compounds.
2. Discuss the Chemical and Physical Characteristics of Representative Carbon Compounds.
3. Describe the Major Classes of Organic Compounds and the Functional Groups Found on These Compounds.
4. Discuss the Structure, Nomenclature, and Chemical reactions of Alkanes and Cycloalkanes.
5. Discuss the Structure, Nomenclature, and Chemical

- reactions of Alkenes and Alkynes
6. Describe the Stereochemical Relationships Found in Organic Compounds
 7. Discuss the Nucleophilic Substitution and Elimination Reactions of Alkyl Halides
 8. Discuss the Structure, Characteristics, and Chemical Reactions of Conjugated System
 9. Describe the Mechanisms of Free Radical Reactions and Give Specific Examples of Polymerization Reactions
 10. Discuss the Concept of Resonance, Aromaticity, and the Structure of Benzene
 11. Demonstrate His or Her Knowledge of Organic Chemical Reactions by Describing the Steps required to Synthesize a Given Organic Compound From Specific Starting Materials
 12. Discuss the Importance of Acid-Base Reactions in Organic Chemistry

Methods of Evaluation: Evaluation of student progress towards achieving stated learning outcomes and performance objectives is the responsibility of the instructor, within the policies of the college and the department. Detailed explanation is included in the expanded syllabus developed by the instructor for each section being taught.