

Master Syllabus

CHE 2121 - Organic Chemistry II

Division: Science, Mathematics and Engineering

Department: Chemistry

Credit Hour Total: 5.0

Lecture Hrs: 4.0 **Lab Hrs:** 3.0

Prerequisite(s): CHE 2111

Date Revised: December 2014

Course Description:

The study of aldehydes, ketones, carboxylic acids, derivatives of carboxylic acids, enolates, carbanions, amines, polycyclic and heterocyclic aromatic compounds, pericyclic reactions, polymers, composite materials and biochemistry. Four classroom, three lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

Polycyclic and heterocyclic aromatic compounds

Demonstrate an understanding of the nomenclature and reactions of polycyclic and heterocyclic aromatic compounds.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Carbohydrates and Lipids

Demonstrate an understanding of the structures, functions and nomenclature of carbohydrates and lipids.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Polymers

Demonstrate an understanding of basic polymer chemistry.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Carbonyl Compounds

Demonstrate an understanding of the structure, nomenclature and reactions of aldehydes, ketones, and carboxylic acids.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Amines, Amino Acids and Proteins

Demonstrate an understanding of the structure, function, reactivity and nomenclature of amines, amino acids and proteins.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Enolates and Carbanions

Demonstrate an understanding of Enolates and Carbanions and how they function as the building blocks of organic synthesis.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Pericyclic Reactions

Demonstrate an understanding of pericyclic reactions.

Assessment Method: Locally developed exams

Performance Criteria: 70% of exam questions answered correctly

Outline:

Aldehydes and Ketones
Carboxylic Acids
Derivatives of Carboxylic Acids
Enolates and Carbanions: Building Blocks for Organic Synthesis
Polycyclic and Heterocyclic Aromatic Compounds
Pericyclic Reactions
Carbohydrates
Amino Acids and Proteins
Lipids and Related Natural Products
Special Topic - Polymers
Amines