CHM 201 - INTRO TO ORGANIC CHEMISTRY

Course Description

An introduction to organic chemistry. Topics include the classes of organic compounds, reactions, synthesis, and mechanisms. Includes laboratory. NOTE: This course is a one semester course and is not appropriate for all majors. Please check with an advisor prior to registration. Group 1 lab course.

Credit Hours

4

Contact Hours

5

Lecture Hours

3

Required Prerequisites

CHM 101 or CHM 150 and MTH 111 or MTH 120, all with a grade of 2.0 or better.

Corequisites

CHM 201L

Recommended Prerequisites or Skills Competencies

ENG 111

General Education Outcomes supported by this course

Critical Thinking - Direct

Course Learning Outcomes

Knowledge:

- Be able to articulate a broad set of chemical knowledge concerning the fundamentals in organic chemistry.
- Explain electron delocalization and its effect on stability and reactivity.

Application:

- Interpret patterns of reactivity on the basis of mechanistic reasoning.
- Design syntheses of organic molecules of moderate complexity.
- Demonstrate the fundamentals acid/base and electrophile/nucleophile reactions in organic chemistry.
- Use standard laboratory equipment, modern instrumentation, and classical techniques to carry out experiments.
- Perform the experiments, and appropriately record and analyze the results.

Integration:

- Critique the synthesis, labeling, and production of organic chemicals.
- Connect to real world examples of organic chemistry in action.
- Evaluate the consequences (reactivity, properties) of the three-dimensionality of molecules.
- Summarize the concepts and results of their laboratory experiments through effective writing and oral communication skills.

Human Dimension:

- Develop interpersonal skills by working in groups: through joint assignments, study groups, and most importantly in collaboration during laboratory experiments.

Caring - Civic Learning:

- Recognize the connections between organic chemistry and real life applications.
- Better appreciate the concepts of this course and how they related to the real world.

Learning How to Learn:

- Think intuitively about organic chemistry reactions.
- Organize, summarize, and synthesize complicated conceptual ideas.
- Initiate new problem solving skills and strategies"