JAMESTOWN COMMUNITY COLLEGE State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Organic Chemistry I

Course Abbreviation and Number: CHE 2530 Credit Hours: 4

Course Type: Lecture/Lab

Course Description: Students will apply many concepts from college chemistry to the study of organic molecules. Students will be able to name and draw structures, assign properties, predict reaction products, synthesize and explain the reaction mechanisms for alkanes, alkenes, alkynes, and cyclic hydrocarbons as well as alkylhalides, alcohols, and ethers. Aromatic compounds will be introduced and stereochemistry and effects of solvents will also be investigated. A broad spectrum of classical organic reactions will be examined in the lab using microscale techniques.

Prerequisite: CHE 1560.

Student Learning Outcomes:

Students who demonstrate understanding can:

- 1. Write formal scientific laboratory reports based on experiments that use microscale laboratory techniques.
- 2. Understand the IUPAC process of naming organic molecules.
- 3. Understand and utilize common organic chemistry reactions based on the functional groups present on the molecules.

Topics Covered:

- Structure
- Nomenclature
- Properties
- Preparation of and reactions of alkanes
- Alkenes
- Alkynes
- Alcohols
- Ethers and aromatic compounds

Information for Students

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- Expectations of Students
 - <u>Civility Statement</u>
 - <u>Student Responsibility Statement</u>
 - <u>Academic Integrity Statement</u>
- <u>Accessibility Services</u> Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- <u>Get Help: JCC & Community Resources</u>
- Emergency Closing Procedures
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

• Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.

Effective Date: Fall 2021

- Stereochemistry and reaction mechanisms
- Carbocations and electrophilic aromatic substitution reactions
- Effects of solvent and structure on mechanism are discussed
- Infrared spectroscopy is also done