1. **COURSE TITLE\*:** Organic Chemistry I
2. **CATALOG – PREFIX/COURSE NUMBER/COURSE SECTION\*:** CHEM 2201
3. **PREREQUISITE(S)\*:** CHEM 1161 & 1162

**COREQUISITE(S)\*:** CHEM 2211

1. **COURSE TIME/LOCATION/MODALITY: (*Course Syllabus – Individual Instructor Specific*)**
2. **CREDIT HOURS\*:** 4 **LECTURE HOURS\*:** 4

**LABORATORY HOURS\*:** 0  **OBSERVATION HOURS\*:** 0

1. **FACULTY CONTACT INFORMATION: *(Course Syllabus – Individual Instructor Specific)***
2. **COURSE DESCRIPTION\*:**

This course is designed to give the student extensive background in bonding, nomenclature, and reactions of alkanes, cycloalkanes, alkenes, alkynes, alcohols, alkyl halides, conjugated alkadienes, allylic systems and arenes. Addition, elimination, nucleophilic substitution, and electrophilic aromatic substitution reactions are covered including their mechanisms. Spectroscopy of organic compounds is introduced.

1. **LEARNING OUTCOMES\*:**

Upon completion of this course the student should be able to:

1. Understand the covalent bond in hydrocarbons and related organic compounds and how it differs in ionic bonds.
2. Draw Lewis structures for organic compounds.
3. Determine IUPAC names for alkanes, alkenes, alkynes, alcohols, alkyl halides and arene compounds, and give traditional names for the most common of these types of compounds.
4. Describe the difference between substitution and elimination reactions and between unimolecular and bimolecular mechanisms of these reactions.
5. Distinguish between conformations, constitutional isomers and stereoisomers.
6. Determine IUPAC names for stereoisomers of alkenes, cycloalkanes and organic compounds with chiral centers.
7. Understand the importance of conjugation and aromaticity in organic compounds.
8. Predict the product of electrophilic substitution of aromatic rings and understand its mechanism.
9. Determine the identity of simple compounds from their infrared, mass spectroscopy, UV/visible, and 1H and 13C NMR spectra, and understand the basis and applicability of each technique.
10. **ADOPTED TEXT(S)\*:**

*Organic Chemistry*, 10th Edition

Carey and Giuliano, 2016

McGraw-Hill

ISBN: 978-0-07-351121-4

1. **OTHER REQUIRED MATERIALS: (SEE APPENDIX C FOR TECHNOLOGY REQUEST FORM.)\*\***

The molecular modeling CD-ROM bundled with the text is required and will be used with College supplied computer resources. Other books and materials will be supplied in the class.

1. **GRADING SCALE\*\*\*:**

Grading will follow the policy in the catalog. The scale is as follows:

A: 90 – 100

B: 80 – 89

C: 70 – 79

D: 60 – 69

F: 0 – 59

1. **GRADING PROCEDURES OR ASSESSMENTS: (*Course Syllabus – Individual Instructor Specific)***
2. **COURSE METHODOLOGY: *(Course Syllabus – Individual Instructor Specific)***

**14. COURSE OUTLINE: *(Course Syllabus – Individual Instructor Specific)***

***(Insert sample course outline with learning objectives tied to assignments / topics.)***

**15. SPECIFIC MANAGEMENT REQUIREMENTS\*\*\*:**

At the discretion of the instructor.

**16. FERPA:\***

Students need to understand that your work may be seen by others. Others may see your work when being distributed, during group project work, or if it is chosen for demonstration purposes. Students also need to know that there is a strong possibility that your work may be submitted to other entities for the purpose of plagiarism checks.

**17. DISABILITIES:\***

Students with disabilities may contact the Disability Services Office, Central Campus, at 800-628-7722 or 937-393-3431.

**18. OTHER INFORMATION\*\*\*:**

**SYLLABUS TEMPLATE KEY**

**\*** Item cannot be altered from that which is included in the master syllabus approved by the Curriculum Committee.

**\*\*** Any alteration or addition must be approved by the Curriculum Committee

**\*\*\*** Item should begin with language as approved in the master syllabus but may be added to at the discretion of the faculty member.