| **PROFESSOR:** |  |
| --- | --- |
| **OFFICE LOCATION:** |  |
| **OFFICE HOURS:** |  |
| **PHONE NUMBER:** |  |
| **E-MAIL:** |  |
| **SEMESTER:** |  |
| **DELIVERY METHOD:** |  |

# COURSE NUMBER AND TITLE, CATALOG DESCRIPTION, CREDITS:

## CHM 2210 Organic Chemistry I (4 Credits)

This course is the first part of a two-semester sequence in organic chemistry designed for students entering professional fields that require this sequence, such as medicine, pharmacy, veterinary and dental programs, and other physical science areas. The course covers the study of hydrocarbon compounds and their halogen derivatives. Topics include ways by which these compounds are synthesized, how they are used synthetically, how they are named, mechanisms by which they undergo change, and stereochemical considerations.

## PREREQUISITES FOR THIS COURSE:

CHM 2045/2045L and CHM 2046/2046L with a grade of “C” or better in each course

### CO-REQUISITES FOR THIS COURSE:

CHM 2210L

## GENERAL COURSE INFORMATION:

Topic Outline

A review of atomic and molecular bonding theories

A review of acid-base chemistry, thermodynamics, kinetics and equilibrium as these apply to the study and understanding of organic chemistry

The study of the alkane and cycloalkane functional groups; properties, reactions, and mechanisms

The study and application of stereochemistry

The study of the haloalkane functional group; properties, reactions, and mechanisms

The study of the alkene functional group and allylic systems; properties, reactions, and mechanisms

The study of the alkyne functional group and/or the alcohol functional group and the Diels-Alder 2+4 cycloaddition reaction; properties, reactions, and mechanisms

## ALL COURSES AT FLORIDA SOUTHWESTERN STATE COLLEGE CONTRIBUTE TO THE GENERAL EDUCATION PROGRAM BY MEETING ONE OR MORE OF THE FOLLOWING GENERAL EDUCATION COMPETENCIES:

**C**ommunicate clearly in a variety of modes and media.

**R**esearch and examine academic and non-academic information, resources, and evidence.

**E**valuate and utilize mathematical principles, technology, scientific and quantitative data.

**A**nalyze and create individual and collaborative works of art, literature, and performance.

**T**hink critically about questions to yield meaning and value.

**I**nvestigate and engage in the transdisciplinary applications of research, learning, and knowledge.

**V**isualize and engage the world from different historical, social, religious, and cultural approaches.

**E**ngage meanings of active citizenship in one’s community, nation, and the world.

A. General Education Competencies and Course Outcomes

1. Listed here are the course outcomes/objectives assessed in this course which play an integral part in contributing to the student’s general education along with the general education competency it supports.

General Education Competency: Evaluate

Course Outcomes or Objectives Supporting the General Education Competency Selected:

Identify organic molecules based on functional groups covered in class.

Interpret absolute conformation and identify steric hindrance in organic molecules using model kits.

Compute optical rotation, quantify selectivity in organic reactions, and analyze energy diagrams.

Analyze organic molecular structure and function, and formulate reaction mechanisms using the tools of stereochemistry and transition state theory.

Focusing on data correlated to global warming; analyze the effects of hydrocarbons in the environment.

Create synthesis reactions with organic functional groups and modify them to synthesize new functional groups and larger, more complex organic molecules.

Compare and contrast the molecular/electronic mechanisms by which the organic functional groups covered in class react, and evaluate the mechanisms by which they facilitate reactions.

Define, use, and write examples of all pertinent vocabulary terms covered in class.

## DISTRICT-WIDE POLICIES:

### PROGRAMS FOR STUDENTS WITH DISABILITIES

Florida SouthWestern State College, in accordance with the Americans with Disabilities Act and the College’s guiding principles, offers students with documented disabilities programs to equalize access to the educational process. Students needing to request an accommodation in this class due to a disability, or who suspect that their academic performance is affected by a disability should contact the Office of Adaptive Services at the nearest campus. The office locations and telephone numbers for the Office of Adaptive Services at each campus can be found at <https://www.fsw.edu/adaptiveservices>.

### REPORTING TITLE IX VIOLATIONS

Florida SouthWestern State College, in accordance with Title IX and the Violence Against Women Act, has established a set of procedures for reporting and investigating Title IX violations including sexual misconduct. Students who need to report an incident or need to receive support regarding an incident should contact the Equity Officer at [equity@fsw.edu](mailto:equity@fsw.edu). Incoming students are encouraged to participate in the Sexual Violence Prevention training offered online. Additional information and resources can be found on the College’s website at <https://www.fsw.edu/sexualassault>.

## REQUIREMENTS FOR THE STUDENTS:

List specific course assessments such as class participation, tests, homework assignments, make-up procedures, etc.

## ATTENDANCE POLICY:

The professor’s specific policy concerning absence. (The College policy on attendance is in the Catalog and defers to the professor.)

## GRADING POLICY:

Include numerical ranges for letter grades; the following is a range commonly used by many faculty:

| **Grade Percent** | **Letter Grade** |
| --- | --- |
| 90 - 100 | A |
| 80 - 89 | B |
| 70 - 79 | C |
| 60 - 69 | D |
| Below 60 | F |

(Note: The “incomplete” grade [“I”] should be given only when unusual circumstances warrant. An “incomplete” is not a substitute for a “D,” “F,” or “W.” Refer to the policy on “incomplete grades.)

## REQUIRED COURSE MATERIALS:

(In correct bibliographic format.)

## RESERVED MATERIALS FOR THE COURSE:

Other special learning resources.

## CLASS SCHEDULE:

This section includes assignments for each class meeting or unit, along with scheduled Library activities and other scheduled support, including scheduled tests.

## ANY OTHER INFORMATION OR CLASS PROCEDURES OR POLICIES:

(Which would be useful to the students in the class.)