Course Title: CHM 238 General Organic Chemistry II
Term: Winter 2023
Instructor: TBA
Course Credit: 3
Mode of Instruction: Online

Course Description:

Continuation of CHM 235 General Organic Chemistry I, this course aims to provide a solid foundation of organic chemistry. Chemistry of common organic functional groups: aldehydes and ketones; carboxylic acids and their derivatives; amines; aromatic compounds will be studied. Topics also cover ethers and epoxides, spectroscopy, carbohydrates, amino acids and synthetic polymers.

Course Prerequisites:

CHM 235 General Organic Chemistry I

Learning Outcomes:

By the end of the course, the student should be able to:

A. Gain insight into the basic concepts and major assumptions in the field of organic chemistry;

B. Explain the structure of molecules, acids and bases, carbohydrates as well as their reactivity;

C. Understand reactivity of different chemical systems in terms of their propensity towards electrophiles and nucleophiles;

D. Choose appropriate separation and analytical methods for basic chemical laboratory work.

E. Apply the knowledge leant in this course to solve real-life problem.

Course Material:

David R. Klein, ***Organic Chemistry***, 3rd Edition, Global Edition, 2018.

Evaluation:

- 2 Assignments [10%]
- 2 Quizzes [30%]
- Mid-term Exam [25%]
- Final Exam [35%]

Description of the Evaluation tasks:

Assignment/ Essay/ ... : During the term, students will be required to finish several evaluation tasks within due date. All the tasks are linked with specific course topics/outcomes and will adequately assess students' competence and learning outcomes. Students are encouraged to meet with instructor about these tasks at any point.

Mid-term/ Final Exams/ Quiz/... : There may be periodic quizzes given at the beginning of lecture sessions; the feedback from these quizzes will monitor the progress of the learners and help to set learning priorities. There will be mid-term exam/ final exam for the course. They are the basic criteria for the evaluation of students' learning outcomes and final grade.

Grading Policy:

Students are supposed to finish each online lecture. Prior to each class, students should finish the required readings. During the class time, students are encouraged to make use of all relevant online course resources and communicate with the instructor. Students' grades are accumulated based on the cumulative evaluations.

Students' letter grade will be assigned according to the following scale:

A+ 90-100	A 85-89	A- 80-84
B+ 77-79	B 73-76	B- 70-72
C+ 67-69	C 63-66	C- 60-62
D+ 57-59	D 53-56	D- 50-52
F < 50		

Academic Integrity:

Students must strictly adhere to the university's academic integrity rule; and all essays, exams and any other form of academic assignments must adhere to these rules. Any form of plagiarism, cheating, or misappropriation of materials will be considered a violation of academic integrity and will be punishable by the university.

Withdrawal from the Course(s):

Students will be able to apply for a transfer or withdrawal within 3 days of the starting date of the course. If a withdrawal is applied for within 3 working days, the tuition fee will be fully refunded. After 3 days, the tuition fee will not be refunded. If a withdrawal is applied for in the first two weeks, it will be recorded as W (Withdraw) on the course transcript. After this initial two-week period, the class will be recorded as F (Fail).

Tentative Schedule:

Week 1

1	Course Overview
2	Acids and Bases
3	Stereoisomerism
4	Alcohols and Phenols
5	Ethers and Epoxides; Thiols and Sulfides **Assignment 1**

Week 2	
6	Infrared Spectroscopy and Mass Spectrometry
7	Nuclear Magnetic Resonance Spectroscopy
8	Conjufated Pi Systems and Pericyclic Reactions
9	Aromatic Compounds
10	Aromatic Substitution Reactions **Quiz 1**
Week 3	
11	**Midterm Test**
12	Aldehydes and Ketones
13	Aldehydes and Ketones (Cont.)
14	Carboxylic Acids and Their Derivatives
15	Alpha Carbon Chemistry: Enols and Enolates **Assignment 2**
Week 4	
16	Amines
17	Carbohydrates
18	Amino Acids, Peptides, and Proteins
19	Amino Acids, Peptides, and Proteins (Cont.)
20	Lipids **Quiz 2**
Week 5	
21	Synthetic Polymers
22	Introduction to Organometallic Compounds
23	Organic Polymer Chemistry
24	Final Exam Reviews
25	**Final Exam**