

## CHEM 231 Syllabus

Course Code	Course Name	Credits	Prerequisite(S)	Classification
CHEM 231	Organic Chemistry I	4 (3T+ 3P)	CHEM 110	Department Requirement

**Course Description** Organic Chemistry 1 is a mandatory course for all Chemistry students. The aim of this course is to give the student a detailed study about the chemistry of organic compounds with poly-functional groups.

**Class** Classes are held 2 times/week each for 80 minutes.

**Scheduling** Labs are held 1 time/week for 150 minutes.

**Textbook(s)**

- Organic chemistry, by Graham Solomons TW, Craig B Fryhle, 12th ed., 2016
- Organic Chemistry, by John E. McMurry, 9th ed., 2015

**Course Coordinator** Dr. Zahra Alamshany

Dr. Layla Taib

**Assessment tools:**

Week Due		Assessment				
5		Exam 1				
9		Exam 2				
4-8		Homework				
16		Final Exam				

**Relationship to SOs**

1	2	3	4	5	6
X	X	X			

**CLOs**

By the end of this course student will be able to:

CLO1. Recall the fundamental principles of organic chemistry that include types of hybridization, chemical bonds in organic compounds. (SO1)

CLO2. Recognize the nomenclature, structure, and physical properties of the different classes of organic compounds. (SO1)

CLO3. Identify the type of functional groups and the type of reactions of organic compounds. (SO1)

CLO4. Illustrate isomerism and stereochemistry of organic compounds. (SO2)

CLO5. Develop basic skills for the multi-step synthesis of organic compounds and write a reasonable mechanism for a chemical reaction. (SO2)

CLO6. Develop the basic practical skills for the qualitative analysis of organic compounds. (SO3)

## Contents

List of Topics	No. of Weeks
Chapter 1: The basics bonding and molecular structure	1
Chapter 2: Representative Carbon Compounds: Functional Groups	1
Chapter 4: Alkanes: Nomenclature, Conformational Analysis and Reactions.	2
Chapter 5: Stereochemistry: Chiral Molecules	1
Chapter 7: Alkenes and Alkynes I	1
Chapter 8: Alkenes and Alkynes II	1
Chapter 11: Alcohol and Ether	2
Chapter 12: Alcohols from Carbonyl Compounds	1
Chapter 14: Aromatic Compounds	1
Chapter 15: Reactions of Aromatic Compounds	1
Chapter 16: Aldehydes and Ketones I.	1
Chapter 18: Carboxylic Acids and Their Derivatives.	2

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