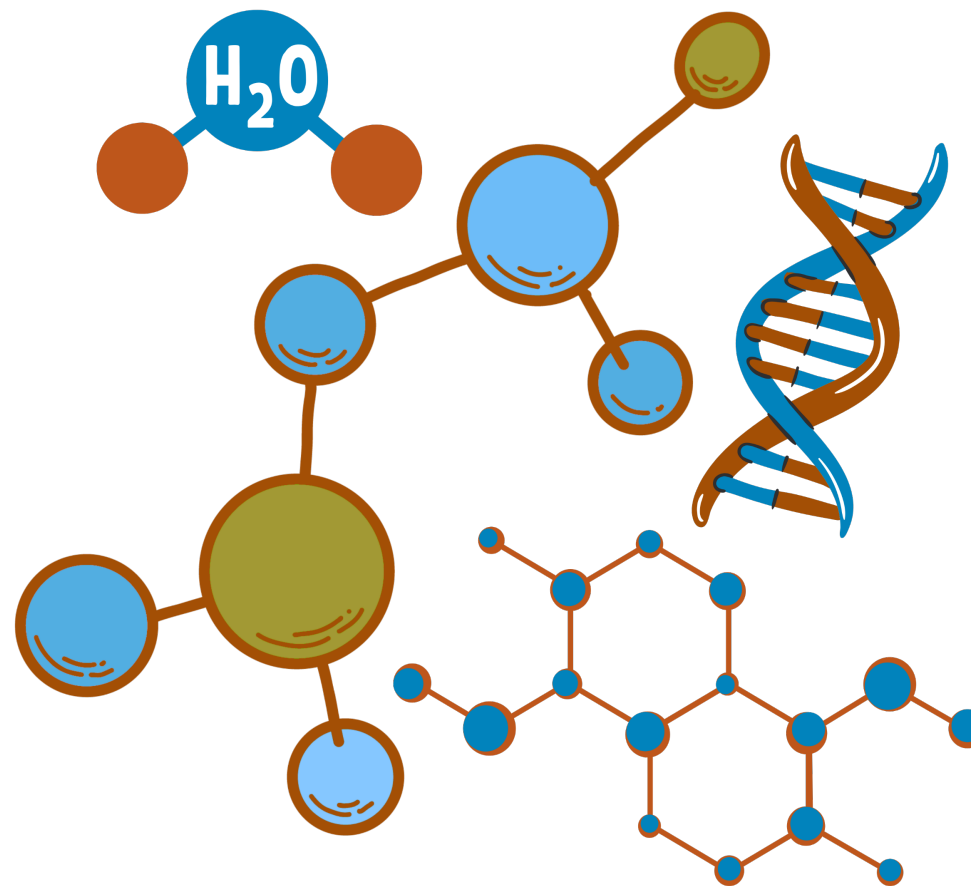


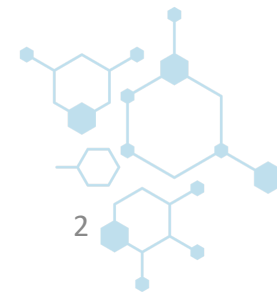
Chapter 0: *Syllabus*



Course Title and General Information

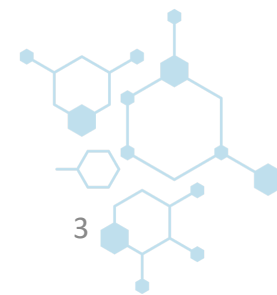
Course Code	Course Title	Program
CHEM 109	Introduction to Organic Chemistry	The Common First Year (Health track, Applied Medical Sciences, Nursing)

Credit Hours	Department	College
3 (2 Lectures + 1 Practical)	Chemistry Department	Science



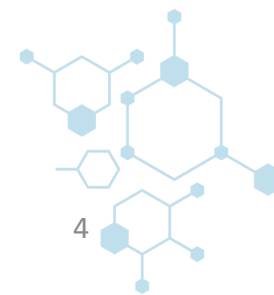
Course Content Overview and Reference

Chapter 1	Introduction to Organic Chemistry
This chapter covers the origin of carbon compounds and the development of organic chemistry, along with atomic structure, electron configuration, and molecular orbitals. It also includes chemical bonding, hybridization, molecular geometry, resonance, and electron delocalization.	
Chapter 2	Structure and Classification of Organic Compounds
This chapter presents the structure and classification of hydrocarbons, including alkanes, alkenes, alkynes, cycloalkanes, and aromatic compounds, along with types of isomerism and their stability. It also explains the structure and classification of oxygen- and nitrogen-containing functional groups such as alcohols, ethers, aldehydes, ketones, carboxylic acids, esters, amides, amines, and nitriles.	
Chapter 3	Nomenclature of Organic Compounds
This chapter explains the nomenclature of hydrocarbons, including alkanes, alkenes, alkynes, cycloalkanes, and aromatic compounds, using both IUPAC and common systems. It also covers the nomenclature of functional groups containing oxygen and nitrogen, such as alcohols, ethers, aldehydes, ketones, carboxylic acids, esters, amides, amines, and nitriles.	



Course Content Overview and Reference

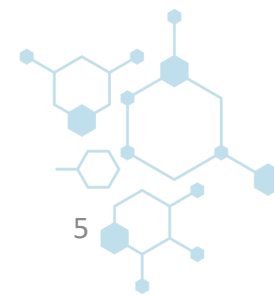
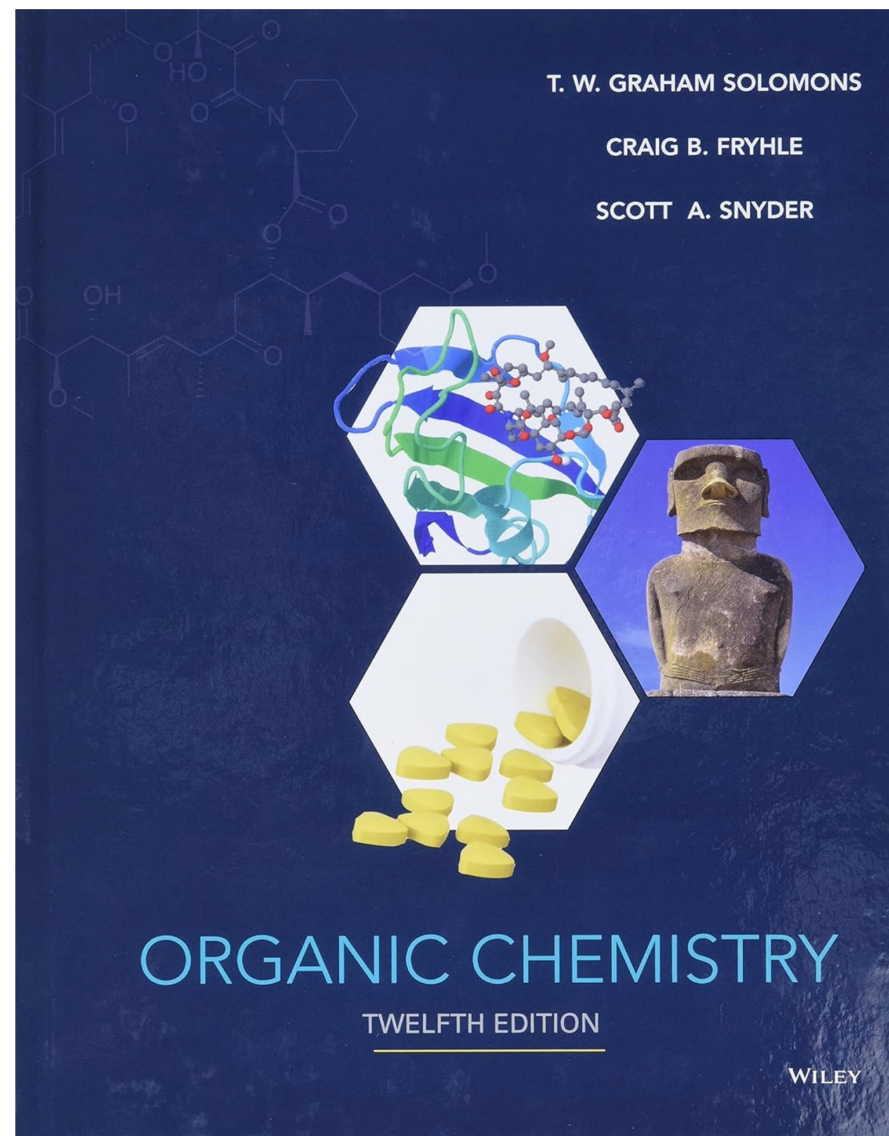
Chapter 4	Physical Properties and Intermolecular Forces
This chapter explains the physical properties of organic compounds such as boiling points, solubility, and acidity in relation to molecular structure and intermolecular forces. It also covers the physical properties of hydrocarbons, alcohols, ethers, carboxylic acids, and amines, including their polarity and basicity.	
Chapter 5	Organic Reactions
This chapter explains the major classes of organic reactions, including acid–base, radical, elimination, electrophilic addition, aromatic substitution, nucleophilic substitution, oxidation–reduction, and functional group transformations. It highlights reaction mechanisms, reactivity patterns, and key examples across hydrocarbons, aromatic systems, and oxygen- and nitrogen-containing compounds.	
Chapter 6	Biomolecules and Their Biological Relevance
This chapter covers the structure, reactions, and biological importance of carbohydrates, lipids, amino acids, proteins, and nucleic acids. It explains their classifications, functional roles, and key biochemical processes such as metabolism, synthesis, and energy storage.	



Reference

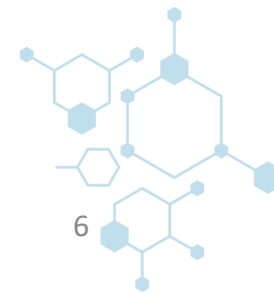
Reference

Solomons, T. W. Graham, Fryhle, Craig B., & Snyder, Scott A. (2016). Organic Chemistry (12th ed.). Hoboken, NJ: John Wiley & Sons, Inc. ISBN 978-1-118-87576-6.



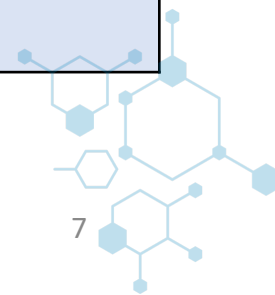
Course Objectives

Name organic compounds using IUPAC and common names	Recognize and apply functional groups regarding their properties, synthesis, and transformations	Understand the occurrence of organic compounds in nature
Understand basic organic reactions for preparation and reactions	Learn about carbohydrates, amino acids, proteins, nucleic acids	Acknowledge organic chemistry's role in understanding biochemistry principles.



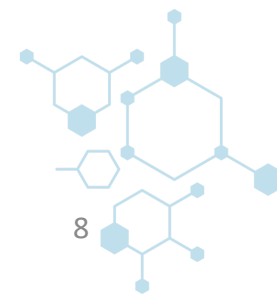
Course Learning Outcomes

Knowledge	Skills	Values
<ul style="list-style-type: none">Identify and describe fundamental concepts of organic chemistry including the structure, bonding, and properties of organic molecules.Explain the reaction rules of key organic reactions such as substitution, addition, elimination, and rearrangement reaction.	<ul style="list-style-type: none">Apply organic chemistry principles and critical thinking to solve problems related to structure, nomenclature, preparation, and reactions of organic compounds.Conduct organic chemistry laboratory experiments safely and accurately, including the preparation, purification, and identification of organic compounds and reporting experimental results.	<ul style="list-style-type: none">Demonstrate ethical conduct and responsibility in laboratory work, including proper waste disposal, and respect for laboratory rules, while effectively collaborating with peers in group activities.



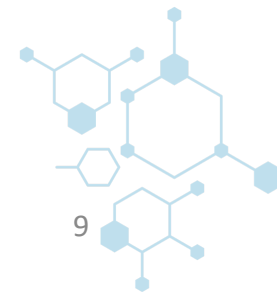
Assessment Methods and Weighting

No.	Assessment Task	Points
1	1 st Midterm Exam	15
2	2 st Midterm Exam	15
3	Final Exam	40
4	Practical Exam	30
Total		100



Regulations for Attendance, Absence, and Alternative Examinations

Item	Limit/Rule
Semester Length	15 weeks (15 lectures)
Allowed Absence	25% = max 4 lectures
Lecture Duration	2 × 50 min per day (2 academic hours)
Max Absence in Hours	8 academic hours (4 days)
Absence Excuses	Submit via “Daam” Platform (Common First Year Deanship – KSU)
Alternative Examination Regulations	<ol style="list-style-type: none">1. Student must not have taken the Primary Examination.2. Student must not be denied in the course.3. Request must be submitted to the Common First Year Deanship within one week of the Primary Examination date.4. Excuse must be official and government-approved.5. No alternative for an alternative examination.



*Good
Luck*

