The Republic of Iraq
Ministry of Higher Education and Scientific Research
Scientific Supervision and Evaluation Authority

University: Shatt Al-Arab University College
College: Shatt Al-Arab University College
Department: Department of Laser .Technology and Optoelectronic Eng
The first stage
Name of the lecturersMurtadha Firas Hasan
..Scientific title: Asst. Lucterur

weekly lesson schedule

Course Lecturer	**Asst.lucterur Murtadha Firas Hasan**				
e-mail	**Murtada.Firass@sa-uc.edu.iq**				
Title	**General Chemistry**				
Course Coordinator	**Semester**				
Course Objective	**To explain the fundamental principles of general chemistry with a focus on theoretical and practical foundations of organic compounds, their structure, properties, reactions, and applications.**				
Course Description	**This course provides a comprehensive introduction to the fundamental concepts of general chemistry, focusing on the study of structure, nomenclature, isomerism, functional groups, and reaction mechanisms. Students will learn about alkanes, alkenes, alkynes, aromatic compounds, alcohols, aldehydes, ketones, carboxylic acids, esters, and amines. Laboratory experiments will provide practical skills in the synthesis, purification, and characterization of organic compounds, as well as the use of spectroscopic techniques (IR, UV-Vis) to identify organic molecules.**				
Textbook	**[1] Morrison, Robert T., and Robert N. Boyd. Organic Chemistry. Prentice Hall.**				
References	**[2] Smith, Janice Gorzynski. Organic Chemistry. McGraw-Hill Education.** **[3] Wade, Leroy G. Organic Chemistry. Pearson Education.**				
Final exam 50	**Homework**	**Daily Quizzes**	**Lab Work**	**Midterm Exam**	**Project**
	10	**10**	**10**	**10**	**10**
General Notes					

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Week	Lecture Title	Hours
1	Introduction to Organic Chemistry: bonding, structure, and hybridization	3
2	Nomenclature and isomerism in organic compounds	3
3	Alkanes: structure, properties, and reactions	3
4	Alkenes: structure, properties, and addition reactions	3
5	Alkynes: structure, acidity, and reactions	3
6	Aromatic compounds and aromaticity (Benzene and derivatives)	3
7	Stereochemistry: chirality and optical activity	3
8	Alcohols and Phenols: properties and reactions	3
9	Aldehydes and Ketones: nucleophilic addition reactions	3
10	Carboxylic acids and derivatives (esters, amides)	3
11	Amines: structure, properties, and reactions	3
12	Reaction mechanisms: substitution and elimination (SN1, SN2, E1, E2)	3
13	Spectroscopy in organic chemistry (IR, UV, NMR)	3
14	Laboratory techniques: purification, recrystallization, distillation	3
15	Applications of organic chemistry in pharmaceuticals and industry	3
16	Preparatory week before the final exam	3

lecturers signature: **Head of Department signature:**