Course Description Form

1. Course Name:
Organic Chemistry
2. Course Code:
ORCH105
3. Semester / Year:
FaII Semester /Academic Year 2023/2024
4. Description Preparation Date:
1-9-2023
5. Available Attendance Forms:
In Presence
6. Number of Credit Hours (Total) / Number of Units (Total)
2 hours Theoretical 3 hours practical /3.5 unit
7. Course administrator's name (mention all, if more than one name)
Name: Lecturer Sura SaIim Hamid ،Lecturer AIaa Taha Azeez EamiI: surasaIimhamid74@uomosul.edu.iq
8. Course Objectives

Theoretical:	Practical:
・ Providing students with awareness of the importance of chemistry at the industrial, agricultural and environmental levels. ・ Provide applications with a broad foundation and balance of knowledge and skills in organic chemistry. ・ Developing the student's ability to apply their knowledge and professional skills in solving experimental problems in chemistry, which exceeds the goals of practical development. ・ Developing the skills of valuable students in their field of specialization. ・ Students gain from applying and employing their skills to serve society	・ Introducing and informing the student about the most important devices and equipment ・ Used in the laboratory ・ Introducing the student to the most important conditions that must be met in an ideal laboratory ・ Introducing the student to safety procedures while working in the laboratory. ・ Teaching the student the best diagnostic methods. ・ Finding the appropriate and quick method for diagnosis ・ Enable the student to perform calculations to find the concentrations of substances and the percentages of the resulting substances. ・ Finding alternatives if the devices used are not available.

9. Teaching and Learning Strategies	
Theoretical: · Interactive lecture · Brainstorming · Dialogue and discussion · Assignment of reports · Conduct daily tests and monthly examinations	Practical: · Interactive lecture · Discussion, dialogue and brainstorming · Conducting laboratory experiments · Set reports · Conduct daily tests and · Monthly checks

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2h 3h	A1: The student is introduced to the concept of organic chemistry and its importance in different areas of life. B6: Student sets the melting point	Theoretical: General principles of organic chemistry practical: Determination of melting point	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
2	2h 3h	A2: The student is familiar with the most important properties, names, reactions, and preparation of alkanes B7: Write a report on the boiling point	Theoretical: Saturated Hydrocarbons (alkanes) practicaI: Determination of boiling point	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
3	2h 3h	B1: The student enumerates the types of alkenes in terms of nomenclature and metho of preparing them A7: The student uses a distillation device for purification	Theoretical: Unsaturated Hydrocarbons (alkenes) practical: Purification of liquid organic compounds by simple distillation	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
4	2h 3h	B2: The student explains the types of reactions of alkenes and dienes A8: The student learns about the types of solvents used for	Theoretical: Reactions of alkenes and types of dienes Practical: Recrystallization + Scientific visit	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions

		recrystallization			
5	2h 3h	A3: The student learns about the types of alkynes in terms of nomenclature, methods of preparing them, and their reactions C5: The student participates in the purification of solid organic compounds by sublimation	Theoretical: Alkynes (acetylenes) practical: Sublimation	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
6	2h 3h	A4: The student distinguishes between the chemical and physical properties of aromatic compounds and ways to name them B8: The student carries out a practical application procedure on how to separate liquid or solid organic compounds by solvent extraction	Theoretical: Properties and nomenclature of aromatic compounds practical: Solvent extraction	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
7	2h 3h	C1: The student distinguishes between the chemical and physical properties of aromatic compounds and ways to name them A9: The student memorizes the method for preparing methan gas in the laboratory	Theoretical: Preparation and reactions of aromatic compounds practical: Preparation of methane gas	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions

8	2h 3h	B3: The student explains the properties and names of alcohols and phenols A10: The student learns how to prepare 1_Butene	Theoretical: Properties and nomenclature of alcohols and phenols practical: Preparation 1_ Butene	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
9	2h 3h	B4: The student distinguishes between the methods of preparation and reactions of alcohols and phenols B9: The student applies the preparation of acetylene	Theoretical: Preparation and reactions of alcohols and phenols practical: Preparation of acetylene gas	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
10	2h 3h	A5: The student learns about ethers, how to prepare them, and the types of their reactions B10: The student masters the practical application of detecting types of alcohol	Theoretical: Ethers practical: Study of the properties of alcohols	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
11	2h 3h	B5: The student masters how to name, prepare and react aldehydes A11:The student differentiates between aldehydes and ketones through a practical application	Theoretical: Preparation, naming and reactions of aldehydes practical: Reaction and detection of aldehydes and ketones	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
12	2h 3h	C2: The student emphasizes the names, preparation, and reaction of ketones C6: The student participates in a practical application on how to prepare acetone	Theoretical: Preparation, nomenclature and reactions of ketones practical: Preparation of acetone	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions

13	2h 3h	A6: The student participates in a practical application on how to prepare acetone B11: The student experiences a practical application on how to prepare Propanoic acid	Theoretical: Properties and nomenclature of carboxylic acids practical: Preparation of propanoic acid	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
14	2h 3h	C3: The student participates in the types of reactions and methods of preparing carboxylic acids C7: The student understands how to prepare propanealdehyde	Theoretical: Reactions and preparation of carboxylic acids practical: Preparation of propionaldehyde	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions
15	2h 3h	C4: The student understands the importance of amines C8: The student participates in methods for detecting elements	Theoretical; Amines practical: Detect items	Lectures And audio means And reports And conduct experiments	Exams Reports Discussion and questions

11.Course Evaluation

t	Evaluation methods	Evaluation date (one week)	Grade	Relative weight %
1	Final theoretical report + theoretical practical reports	Theoretical 15 weeks Practical 1-15 weeks	7theoretical + 6 practical	13%
2	Short test 1 Quiz	3 weeks	4theoretical + 2practical	6%
3	Midterm exam (theoretical and practical)	9 weeks	10theoretical + 5 practical	15%
4	Short test 2 Quiz	12 weeks	4 theoretical + 2 practical	6%
5	Final practical test	practical exams week	20	20%
6	Final theoretical exam	theoretical exams week	40	40%
			100	100

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	**Organic Chemistry book** **Authors:** • Prof. Dr. SaIim Hamid Hussein • Prof. Dr. Sami Abdul-Ali • KhaIId FathI AI_ShaharI

	University of Mosul **2013 Dar Al-Kutub for Printing and Publishing**
Main references (sources)	**Organic Chemistry** **Authors:** • Dr. Badie Aii Ahmed • Dr. SaIim Hamid Hussein • Khalid Fathi Al-Shahari **Published by Mosul University Press in 1991**
Recommended books and references (scientific journals, reports...)	Principles of Organic Chemistry Authors: • Prof.Dr. Mohamed Magdy Wasel/Cairo Fundamentals of Organic Chemistry Authors: Prof. Dr. Mohamed Wasel
Electronic References, Websites	https://arabian-chemistry.com/ https://scholar.google.com/

Lecturer Name (Theory) Lecturer Sura Salim Hamid	Lecturer Name (Practical) Lecturer AIaa Taha Azeez
Head of Department of Forestry Dr.. Muzahim Saeed Al-Bek	Chairman of the scientific committee Prof. Dr. Muhammad Younis Al-Allaf