Ministry of Higher Education and Scientific research



**Department of ... General Science.** College of .....Basic Education . University of .....Salahaddin Subject: .....Organic Chemistry. **Course Book :** (3- stage) Lecturer's name. MSc. Snowber M. Ahmed

Academic Year (2022–2023)

1. Course name	Organic Chemistry	
2. Lecturer in charge	L. Snowber M. Ahmed	
3. Department/ College	General Science / Basic education collage	
4. Contact	e-mail: <u>snowber.ahmed@su.edu.krd</u>	
	Tel: 0754026887	
5. Time (in hours) per	Theory: 2	
week	Practical: 3	
6. Office hours	10 hrs	
7. Course code		
8. Teacher's academic	In 1997 graduated from chemistry department in	
profile	Education college / Salahaddin University ,in 2004	
	I started worked in Koya Technical Instituted as	
	assist lecturer after qualify master's degree in	
	Biochemistry from Baghdad University Ibn-	
	Alhaitham college ,in 2009 I was admission to	
	academic staff of general science department from	
	basic education college.	

# **Course Book**

#### 9. Keywords : Alkanes, Alkenes, alkynes, Aromatics

### **10. Course overview:**

- This course will exposing the light on the organic molecules in chemistry. This course discuss the nature of carbon atom and the ability of its orbital to receive additional electrons.

The importance of organic compounds and the methods used in their preparation. The types of reactions involved in organic molecules and the reasons of differences.

#### **11. Course objective:**

To distinguish between the organic and inorganic molecules, the effect of bond type in determining the type of reaction in organic molecules.

In addition the types of groups existing in an aromatic ring in determining the type of substitution ortho, para, or meta.

### **12.** Student's obligation

The role of students and their obligation throughout the academic year are the Attendance and completion of all tests, examinations, and homework's.

#### **13. Forms of teaching**

- white board
- hand out
- data show

#### 14. Assessment scheme :- there is two main exams

1- May	
Theory	(15 marks)
Practical	(35 marks)
2- Final exam	(50marks)
Total marks :	(100 %)

#### **15. Student learning outcome:**

The student will have the experience with the different organic molecules and the methods available in carrying out them in addition he will learn the methods of preparation and the type of reactions used to these Alkanes , Alkenes, Alkynes......etc

## **16. Course Reading List and References:**

1. General organic chemistry

#### 2.Advanced organic chemistry

7. The Topics:	Lecturer's name
<ul> <li>The specifications of carbon atom</li> <li>Alkanes, specifications and their nomenclature.</li> <li>Preparation of alkanes</li> <li>Reactions of alkanes</li> </ul>	(1 <sup>st</sup> week) (2 <sup>nd</sup> week) (3 <sup>rd</sup> week) (4 <sup>th</sup> week)

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Alkenes, specifications, activity and nomenclature.	(1 <sup>st</sup> week)		
Preparation of alkenes, Reactions of alkenes	(2 <sup>nd</sup> week)		
Some important mechanisms in alkenes reactions.	(3 <sup>rd</sup> week) (4 <sup>th</sup> week)		
Acetylenes; activity, nomenclature and specifications	(1 <sup>st</sup> week)		
Preparation of acetylene, Reactions of acetylene.	(2 <sup>nd</sup> week)		
✤ Aromatic compounds: Formula and nomenclature	(3 <sup>rd</sup> week)		
,Ortho , Para, and Meta directory groups	(4 <sup>th</sup> week)		
Alcohols: Structure & nomenclature			
Preparation of alcohols, Reactions of alcohols.			
Carboxylic acids: introduction and nomenclature			
Special methods for synthesis of carboxylic acids.			
<ul> <li>Chemical reactions of carboxylic acids.</li> </ul>			
Dicarboxylic acids: formula and nomenclature			
Reactions of benzene ring.			
Amines: types & nomenclature			
Preparation & Reactions of Amines			
18. Practical Topics (If there is any)			
	Dr. Bakhtiar Kakel		
Method of purification	Snowber M. Ahmed		
Distillation – normal distillation			
Fractional distillation	(3 hrs)		
Vacuum distillation			
> Sublimation			
Recrystallization			
> Extraction			
> Soup			
Aspirin synthesis			
Synthesis of polymer			