**Course Description Form**

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| --- |
| 1. Course Name:
 |
| Organic Chemistry 4 |
| 1. Course Code:
 |
| **308 CHOC4** |
| 1. Semester / Year:
 |
|  **Second semester /Third year** |
| 1. Description Preparation Date:
 |
| 1/10/2024 |
| 1. Available Attendance Forms:
 |
| mandatory |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| **60h – 3 units** |
| 1. Course administrator's name (mention all, if more than one name)
 |
| Name: Dr. Luma Salman Abd Email:Luma \_Salman@uodiyala.edu.iq |
| 1. Course Objectives
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| **Course Objectives** | Teaching the student organic chemical reactions and chemical structures and knowledge of the structure of organic compounds and clarification of the mechanism of organic reactions and their practical applications aimed at developing and keeping pace with the scientific development of organic chemistry |
| 1. Teaching and Learning Strategies
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| **Strategy** | * Clarification and explanation of the study materials by the academic staff through the blackboard, smart board and computer.
* Providing students with knowledge through homework assignments for academic vocabulary
* Asking students to visit the library to obtain additional knowledge of the study materials

Improving students' skills by visiting websites to obtain additional knowledge of the study subjects |
| 1. Course Structure
 |
| **Week** | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  |
| 1 | **2** | Additional important information about carboxylic acid derivatives | Additional important information about Carboxylic acid derivatives | Data show and Bord |
| 2 | **2** | Introduction to the stereochemistry of isomers | Stereochemistry | = |
| 3 | **2** | Types of isomers/ their properties and applications of stereochemistry in reactions | Stereochemistry | = |
| 4 | **2** | Aryl halides nomenclature and their physical properties | Aryl halides | = |
| 5 | **2** | (Their chemical reactions) and their application in the Diels Alder reaction | Aryl halides | = |
| 6 | **2** | Methods of preparation | Aryl halides | = |
| 7 | **2** | Ester enolate and applications | Ester enolate | = |
| 8 | **2** | Alpha-beta unsaturated carbonyl compounds | Ester enolate | = |
| 9 | **2** | Special Additions of this type | Ester enolate | = |
| 10 | **2** | Amines and their physical properties | Amines  | = |
| 11 | **2** | Preparation of amines | Amines  | = |
| 12 | **2** | (its chemical reactions) | Amines | = |
| 13 | **2** | Introduction to the chemistry of heterocyclic rings | heterocyclic rings | = |
| 14 | **2** | Phenols and their physical properties with the name of the most important compounds  | Phenol | = |
| 15 | **2** | its chemical reactions/ Preparation of phenols | Phenol | = |
|  |  | Second Exam |  |  |  |
| Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, dailyoral, monthly, or written exams, reports .... etc  |
| 12 -Learning and Teaching Resources  |
| Required textbooks (curricular books, if any) | Organic chemistry, Morrison and Boyd (1) |
| Main references (sources) | 1**-** Essential organic chemist second addition 2- Organic chemistry (sixth edition)3- Interne |
| Recommended books and references (scientific journals, reports...) | www.chemicalprocessing.com |
| Electronic References, Websites | www.bytoco.com |