Faculty of Arts and Science
Course Syllabus
Semester Second
Academic Year 2021/2022

Course Title:	Organic Chemistry lab2
Course No.:	1722302
Prerequisite:	1722201
Concurrent:	1722301
Department:	Chemistry Department
Coordinator:	Nawal Bahtiti

***Instructor:**

Name	Office Number	Office Phone	Office Hours	E-mail
Nawal Bahtiti	2017	1103	Su. Tu. Thu 10.0-13.0 Mon. 11-12	Nawal_h@asu.edu.jo

*** Course Description:**

Practical Organic Chemistry course 1722302 continues with the student the basic techniques for characterization of organic compounds. Distinguish solubility and miscibility properties of organic compounds based on functional group and carbon chain length. Safely assemble and use the appropriate distillation apparatus to carry out simple and fractional distillation, and explain the differences between the two types of distillation Use extraction and recrystallization to purify organic compounds. Conduct simple reactions used in the organic chemistry laboratory. The student will also be trained in the proper way to write a scientific laboratory report.

*** Learning Outcomes:**

Successful completion of this course should lead to the following learning outcomes:

A-Knowledge and Understanding:

A1) Be able to understand the basic concepts of *tests of identification*

A2) Be able to understand the basic concepts of *separations*

A3) Be able to understand the basic concepts of *functional groups*

A4) Understand concepts of preparations of chemical reactions.

B-Intellectual Skills:

B1) Distinguish chemical techniques for separations and purifications

B2) Analyze and compare the different applications requirements

C-Subject Specific Skills:

C1) Implement solution of test purity.

C2) Implement solution of separations

C3) Learn how to implement applications of organic chemistry.

D-Transferable Skills:

D1) Homework and quizzes

D2) Experiments

D3) Assignments and Reports

Program Learning Outcomes (PLOs):

1. Describe the fundamentals of chemistry including structure, reactivity and properties of chemical substances, different situation of reaction and the states of matter.
2. Construct essential facts, principles and theories across the four principal areas of chemistry, i.e., analytical, organic, inorganic and physical.
3. Align major issues currently at the frontiers of chemical research and development
4. Memorize certain knowledge in Arabic and English languages, computer science, Islamic religion
5. Differentiate between the different states of the matter, elements and compounds based on the recognition and quantification of the properties
6. Analyze chemical and spectral data to identify and confirm chemical structures as well as determine chemical composition.
7. Establish and conclude mechanisms for physical and chemical processes.
8. Demonstrate adequate life-long learning skills
9. Select appropriate techniques and procedures for chemical synthesis and analysis.
10. Interpret data derived from laboratory observations and measurements in terms of their significance and the theory underlying them.
11. Employ computational software's and data- processing skills in handling of chemical information and analysis of chemical data.
12. Assemble and use properly chemistry experimental setups
13. Perform correctly quantitative measurements requiring accurate and precise manipulations.

جامعة كل العرب

*** Course Contents and Schedule:**

Week	***Experiments***	***Topics***	CLOs	PLOs
First 8-3		Introduction		
Second 15-3	*1*	Synthesis of Aspirin	A1.B1,C1,D1,D2,D3	1,2,3,5,6,7,8,11,12,13
Third 22-3	*2*	Preparation of Synthetic Banana Oil by a Fisher Esterification	A1,A2,B1,B2,C1,C2,C3.D1.D2. D3	1,2,3,5,6,7,8,11,12,13
Fourth 29-3	*3*	Nitration of Methyl Benzoate	A1,A2,B1,B2,C1,C2,C3.D1.D2. D3	1,2,3,5,6,7,8,11,12,13
Fifth 5-4	*4*	Extraction	A1,A2,B1,B2,C1,C2,C3.D1.D2. D3	1,2,3,5,6,7,8,11,12,13
Sixth 12-4	*5*	Preparation of p-Nitroaniline	A1,A2,B1,B2,C1,C2,C3.D1.D2. D3	1,2,3,5,6,7,8,11,12,13
Seventh 19-4	*Midterm*	Midterm exam		
Eighth 26-4	*6*	Chromatography	A1,A2,B1,B2,C1,C2,C3.D1.D2. D3	1,2,3,5,6,7,8,11,12,13
Ninth 3-5	7	A- The preparation of cyclohexanone from cyclohexanol.	A3,A4,B2,C3,D1,D2,D3	1,2,3,5,6,7,8,9,11,12,13
Tenth 10-5	8	Hydrolysis of Biologically-Derived Triacylglyceride Esters	A3,A4,B2,C3,D1,D2,D3	1,2,3,5,6,7,8,9,11,12,13,
Eleventh 17-5	9	Test for Amino Groups	A3,A4,B2,C3,D1,D2,D3	1,2,3,5,6,7,8,9,11,12,13,
Twelfth 24-5	10	Grignard Reagent	A3,A4,B2,C3,D1,D2,D3	1,2,3,5,6,7,8,9,11,12,
Thirteen 31-5	11	Aldol Reaction: Synthesis of Dibenzalacetone	A3, A4,B2,C3,D1,D2,D3	1,2,3,5,6,7,8,9,11,12,13
Fourteen 7-6	12	Revision		
Fifteen 14-5	Final	Final Exam		

*** Teaching Methods:**

- Inter active lectures
- Group discussions
- Practical Experiments
- Written assignments

*** Evaluation:**

Mid Term Exam	30%
Assignments.	30%
Final Exam	40%
Total	100%

Textbook :

Manual for Practical Organic Chemistry prepared by Nawal Bahtiti and Hedaya hakwati 2022

*** References:**

1- Organic Chemistry2016 by Paula Bruice (8th Edition, ***Pearson Publishing***

2-Textbook of Practical Organic Chemistry 8th ed2019 Vogel

جامعة كل العرب

Subject Coordinator: **Signature:**

Nawal H Bahtiti

Head of Curriculum Committee **Signature:**

Dr. Hussam Miqdad

Department Head **Signature:**

Dr.Hussam Miqdad

Dean Faculty **Signature:**

Dr. Hadeel Saed

Copy to:
Department Head.
Head of Curriculum Committee.
Course File.