هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Organic Chemistry II
Course Code:	CHEM234-3
Program:	Bachelor of Science in Chemistry
Department:	Department of Physical Sciences
College:	College of Science
Institution:	Jazan University
Version:	TP-153 (2024)
Last Revision Date:	31 January 2024

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A. General information about the course:

1. Course Identification

1. Credit hours: (3 hrs)

2. Course type

A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐ Elective		

3. Level/year at which this course is offered: (4th Level/ 2rd Year.)

4. Course general Description:

Course title	Course code	Contact Hours			Credit Hours	Year	Level	Prerequisite	Corequisite
		Lec	Tut	Lab					
Organic Chemistry II	CHEM 234-3	3	0	0	3	2nd	4th	CHEM 233-3	CHEM 235-2

The course aims to give comprehensive knowledge to students about organic compounds and their nomenclatures, methods of preparation, and physical and chemical properties.

5. Pre-requirements for this course (if any)**:**

CHEM233-3

6. Co-requisites for this course (if any)**:**

CHEM235-2

7. Course Main Objective(s):

1- Identifying the physical properties of organic compounds.
2. Identifying the different systems of nomenclature of organic compounds.
3. Classifying the different methods of preparation and reactions of organic compounds.
4. Recognizing the importance of organic compounds and their applications in different fields.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding;** *Upon completion of the course, students are able to:*			
1.1	**Demonstrate a thorough understanding of the nomenclature of alcohols, aldehydes, ketons, carboxylic acids and their derivatives, amines, and nitro compounds as well as the study of their physical properties, preparations and reactions.(P)**	**K1**	**Lecture**	• **Periodic Exams** • **Assignments & Classroom activities** • **Final Exam**
1.2	**Describe and explain the concept of elimination reactions (E1 and E2) and nucleophilic substitution reactions (SN1 and SN2) reactions.(P)**	**K2**	**Lecture**	• **Periodic Exams** • **Assignments & Classroom activities** • **Final Exam**
2.0	**Skills;** Upon completion of the course, students are able to:			
2.1	**Identify and design the reaction mechanisms for performing the organic reactions used in the synthesis and reactions of alcohols, aldehydes, ketons, carboxylic acids and their derivatives and amines.(P)**	**S1**	**Lecture**	• **Periodic Exams** • **Assignments & Classroom activities** • **Final Exam**

C. Course Content

No	List of Topics	Contact Hours
1.	**Introduction to aromaticity: Huckel rule, electrophilic aromatic substitution reactions and orientation in aromatic system.**	**3**

2.	Halo compounds (aliphatic and aromatic).	3
3.	Alcohols and ether (aliphatic and aromatic).	6
4.	Phenols.	3
5.	Aldehydes and Ketones (aliphatic and aromatic).	6
6.	Carboxylic Acids (aliphatic and aromatic).	6
7.	Carboxylic Acid derivatives (aliphatic and aromatic).	6
8.	Amino Compounds	6
9.	Diazonium Salts	3
10	Aromatic Nitro-Compounds	3
Total		45

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	*Periodic Exams*	*During Semester*	*30%*
2.	*Assignments & Classroom Activities*	*During Semester*	*20%*
6.	*Final Exam*	*16-17*	*50%*
	Total		*100%*

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Organic Chemistry. L.G. Wade, JR. 10th Edition. Prentice Hall/P Education Inc. New Jersey, 2023.
Supportive References	1. Organic chemistry, by Graham Solomons TW, Craig B Fryhle, 12 2016. 2. Organic Chemistry. J. McMurry, 9th Edition, Books-Cole, 2023.
Electronic Materials	- https://chem.libretexts.org/Bookshelves/Organic_Chemistry/Map%3A_Organic_Chemistry_(McMurry). 2- https://chem.libretexts.org/Bookshelves/Organic_Chemistry/Book%3A_Organic_Chemistry_with_a_Biological_Emphasis_v2.0_(Soderberg). 3- https://chem.libretexts.org/Courses/Nassau_Community_College/Organic_Chemistry_I_and_II.
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Lecture room(s) for groups of 50 students
Technology equipment (projector, smart board, software)	Smart board, Data show, Black board, internet
Other equipment (depending on the nature of the specialty)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Likert-type Survey CES) Indirect
Effectiveness of Students' assessment	Instructor & Course coordinator	Class room evaluation (direct & indirect
Quality of learning resources	Program coordinator	Indirect
The extent to which CLOs have been achieved	Assessment committee	Indirect
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Physical Sciences Department Council
REFERENCE NO.	Meeting (3)
DATE	12/03/2024 -02/09/1445