



Course Specifications

Institution:	Collage of Education -Zulfi
Academic Department :	Chemistry
Programme :	Chemistry
Course :	organic chemistry (1)-CHEM 121
Course Coordinator :	Nawal Mahgoub Suleman
Programme Coordinator :	
Course Specification Approved Date :	15/ 12 / 1435 Hـ

A. Course Identification and General Information

1 - Course title : 		Course Code: (	
2. Credit hours : 4			
3 - Program(s) in which the course is offered: Chemistry			
4 - Course Language :			
5 - Name of faculty member responsible for the course: 			
6 - Level/year at which this course is offered : Second level			
7 - Pre-requisites for this course (if any) : • -			
8 - Co-requisites for this course (if any) : Organic chemistry (2)-CHEM 221.			
9 - Location if not on main campus : (-)			
10 - Mode of Instruction (mark all that apply) ☐			
A - Traditional classroom ☐	☒	What percentage? ☐	90% ☐
B - Blended (traditional and online) ☐	☐	What percentage? ☐	 % ☐
D - e-learning ☐	☒	What percentage? ☐	10% ☐
E - Correspondence ☐	☐	What percentage? ☐	 % ☐
F - Other ☐	☐	What percentage? ☐	 % ☐
Comments : ☐			

B Objectives

What is the main purpose for this course?

The course includes the basic principles of organic chemistry such as molecular orbital and chemical bonds to identify the organic compounds and interpretation of its physical behavior on the basis of their polarity .Preparation methods, reactions and properties of selected groups of organic compounds as well as their applications☐

Briefly describe any plans for developing and improving the course that are being implemented :

The use of different teaching methods, such as: Blended education and E-learning



C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
First :Theoretical General introduction include the following: atomic orbitals and bonding, - Hybridization (sp ³ , sp ² , sp) ,polarity in organic compound - Initial, molecular and structural formulas, Lewis acids and bases- organic reagents and reactions -functional groups	3	9
Alkanes(open and Cyclic):Nomenclature, Physical properties, preparation methods and reactions	3	9
Alkenes and alkynes:Nomenclature, Physical properties, preparation methods and reactions.	3	9
Aromatic compounds and Benzene : Nomenclature, Physical properties, preparation methods and reactions	4	12
Isomerism and optical isomerism.	1	3
Second :Labrotary Apparatus used in organic laboratory	1	2
Melting and boiling points measurement	2	4
Distillation, Recrystallization, Solvent extraction	3	6
Preparation of aspirin and acetanilide .	2	4
Differentiates between aliphatic and aromatic compounds and between saturated and unsaturated compounds - Lassine test	4	12

2. Course components (total contact hours and credits per semester):

☐	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	3. ☐	-. ☐	2	-. ☐	-. ☐	5 ☐
Credit	3. ☐	- ☐	1 ☐	-. ☐	-. ☐	4

☐

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	To know that : types of hybridization in the carbon atom - types of chemical bonds in organic compounds-and polarization in organic molecules	lecture	Written and oral tests.
1.2	Can write equations for organic compounds preparations or reactions under study	lecture	Written and oral tests.
١.٣	Can listed physical properties of organic compounds under study	lecture	Written and oral tests.
١.٤	Describe alkanes , alkenes , alkynes and aromatic compounds in terms of structure	lecture	Written and oral tests.
١.٥	Defines the tools used in the experiments under study.	Laboratory	Laboratory test
١.٦	Remember the rules for naming organic compounds under study	lecture	Written and oral tests.
2.0	Cognitive Skills		
2.1	Can rewrite equations for organic compounds preparations or reactions under study	lecture	Written and oral tests.
2.2	Can apply rules to the naming of organic	lecture	Written and





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
	compounds.		oral tests.
٢.٣	The distinction between the student alkanes and alkenes and alkynes in terms of structure	lecture	Written and oral tests.
٢.٤	The re-installation of devices requesting some experiments alone.	Laboratory	Laboratory test and observation
٢.٥	Preparation of aspirin and acetanilide	Laboratory	Laboratory test
٢.٦	The estimated value of machinery and chemicals used in the experiments.	Laboratory	Laboratory test
3.0	Interpersonal Skills & Responsibility		
3.1	Distribution of students into groups to conduct experiments	Laboratory	Laboratory test and observation
3.2	Cleaning tools before and after the experiment	Laboratory	Laboratory test and observation
٣.٣	Cleanliness of the place in laboratory	Laboratory	Laboratory test and observation
٣.٤	Maintain herself and her colleagues by applying the security and safety in the laboratory	Laboratory	Laboratory test and observation
٣.٥	-	-	-
٣.٦	-	-	-
4.0	Communication, Information Technology, Numerical		
4.1	Deal with the computer through the use of the World Wide Web.	Discussion	Written and oral tests.
4.2	Calculating the ratio of outputs	Laboratory	Laboratory test
٤.٣	Research in the form of PowerPoint	Discussion	Written and oral tests.
٤.٤	Homework through the D2l program	E-learning	Written and oral tests.
٤.٥	-	-	-
٤.٦	-	-	-
5.0	Psychomotor		
5.1	Use the tools of the laboratory accurately	Laboratory	Laboratory





	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
			test and observation
5.2	Use a device to measure the melting point of organic compounds	Laboratory	Laboratory test and observation
٥.٣	-	-	-
٥.٤	-	-	-
٥.٥	-	-	-
٥.٦	-	-	-

5. Schedule of Assessment Tasks for Students During the Semester:

	Assessment task	Week Due	Proportion of Total Assessment
1	Oral and written exercises	weekly	15%
2	Search in the form of groups presented with PowerPoint	14	5%
3	Mid-semester test	8	20%
4	Final practical test	15	20%
5	Final theoretical test	18	40%
6	-	-	-
7	-	-	-
8	-	-	-

D. Student Academic Counseling and Support

Two hours per week found in Table professor lecturing and unannounced in Billboard

E. Learning Resources

1. List Required Textbooks :

- Principles of aliphatic Organic Chemistry-Ahmad Medhat Islam 1418.
- modern organic chemistry Adel Ahmed Jarar 1995.





- **Alalafaty organic chemistry - Abdullah Hegazy 1418**

2. List Essential References Materials :

- **Principles of Organic Chemistry - Mohammed bin Ibrahim al-Hassan, Hassan bin Mohammed Al-Hazmi.**
- **"Practical Organic Chemistry," Part I, Hassan Amin and al-Hazmi**

3. List Recommended Textbooks and Reference Material :

- **Principles of Organic Chemistry - Mohammed bin Ibrahim al-Hassan, Hassan bin Mohammed Al-Hazmi..**
- **Journal of Saudi Chemical society**

4. List Electronic Materials :

- **www.google.com.**
- **http://en.wikipedia.org/wiki/Organic_chemistry**
- **[www.Springer .com](http://www.Springer.com)**
- **<http://www.organic-chemistry.org>**

5. Other learning material :

- **PowerPoint**
- **Java**
- **Photoshop**

F. Facilities Required

1. Accommodation

- **Building No. 1 Hall 68 is equipped with 25 chair and display screen projector**
Chemistry Lab (1) contains three Benches and display screen and projector is equipped with tools and safety and security of hoods, gas cabinets, shower wash, fire extinguishers and other

2. Computing resources

- **Laptop faculty member.**

3. Other resources

- **laboratory must be equipped with the following: - glassware – various chemicals - Water baths -Bnzin- stoves, etc .**

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching:





- Form calendar course
- Discuss with the students to learn about their views, teaching methods used

2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor :

- Benefit from the expertise of the members of the section and discussion in order to improve job performance
- assessment questionnaire Staff Member of the decision workshops to develop evaluation methods.

3 Processes for Improvement of Teaching :

- Training courses for the development of teaching and learning methods
- Refer to the Web sites to learn new teaching methods

4. Processes for Verifying Standards of Student Achievement

- Checking and correcting sample of student work by independent teacher
- Exchange with another college to correct sample test

5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement :

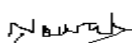
- Writing a report on the course
- plan for improvement and development .
- contact similar departments within the Kingdom
- contact sections of similar universities outside the Kingdom

Course Specification Approved

Department Official Meeting No (.....) Date ... / / H

Course's Coordinator ☐

Name : ☐ Nawal Mahgoub ☐

Signature : ☐ 

Date : ☐ 15 / 12 / 1435 H ☐

☐

Department Head ☐

Name : ☐ ☐

Signature : ☐ ☐

Date : ☐ ... / ... / H ☐

