جامعة المجمعة
Majmaah University

Course Specifications

Institution:	Collage of Education -Zulfi
Academic Department :	Chemistry
Programme :	Chemistry
Course :	organic chemistry (Organic Compounds Spectra) - CHEM 423
Course Coordinator :	Nawal Mahgoub Suleman
Programme Coordinator :	Dr.Gehan Alaemary
Course Specification Approved Date :	15/ 12 / 1435 H

This form compatible with NCAAA 2013 Edition

A. Course Identification and General Information

1 - Course title : Dyes Chemistry	Course Code: CH (M 423
2. Credit hours : 4	
3 - Program(s) in which the course is offered: Chemistry	
4 – Course Language : Arabic	
5 - Name of faculty member responsible for the course: Nawal Mahgoub	
6 - Level/year at which this course is offered : 8th level	
7 - Pre-requisites for this course (if any) : • -	
8 - Co-requisites for this course (if any) : -	
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 :

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B Objectives

- Identify the principles of spectrum
- Identify the different types of spectrum:(UV(,) Vis) ,IR, nmr and mass
- Spectrum uses to identify organic compounds
- Training on practical ways for different spectrum measurements

C. Course Description

1. Topics to be Covered

List of Topics	No. of Weeks	Contact Hours
A:Theoretical Electromagnetic radiation spectrum	1	3
Ultra violet and visible spectra	2	6

IR spectra :absorption of functional groups, and applications in organic chemistry .	2	6
All types of nuclear magnetic resonance spectra .Identification of some functional groups	4	12
Mass spectra of organic compounds : hydrocarbons,aldehydes, ketones, carboxylic acids and its deravatives,amines,alcohols,and phenols .	4	12
Identifications of organic compounds using All types of spsectra	2	6
B:Practical :Idintification of some organic compounds using UV spectra , visible (Vis), infrared spectra IR, NMR and Mass Spectrometry	13	26

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	Identify the different types of spectra	lecture	Written and oral tests.
1.2	Remember the properties of different types of spectrophotometers	lecture	Written and oral tests.

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
١.٣	To describe how to use UV spectra in the identifications of organic compounds	lecture	Written and oral tests.
١.٤	To write steps of using mass spectra in the identifications of organic compounds	lecture	Written and oral tests.
١.٥	Define the NMR spectra	lecture	Written and oral tests.
١.٦	Can listed the properties of mass spectra	lecture	Written and oral tests.
2.0	**Cognitive Skills**		
2.1	Can rewrite steps of using NMR in the identifications of organic compounds	lecture	Written and oral tests.
2.2	Apply identification of some organic compounds using UV spectra , visible (Vis), infrared spectra IR, NMR and Mass Spectrometry	Laboratory	Laboratory test
٢.٣	The distinction between different types of absorptions in infrared spectra	lecture	Written and oral tests.
٢.٤	Summarizes the most important properties UV spectra	lecture	Written and oral tests.
٢.٥	Identification formulas of some unknown organic compounds from their spectrum	Laboratory and lecture	Laboratory and lecture 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	-	-	-

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
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	**Calculate of some absorbance values of organic compounds in the UV spectrum**	Discussion	Written and oral tests.
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 chemicals of the laboratory accurately**	Laboratory	Laboratory test and observation
5.2	**Uses of IR ,NMR ,UV and mass spectrophotometers accurately**	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**	weakly	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 :

- **The basic principles in the spectra of organic compounds " Hassan Mohammed al-Hazmi, Salem Schoeman Alchwimman Library Khuraiji,1986.**
- **spectrometric identification of organic compounds : Silverstein and G . Gayton Bassler John Wiley and Sons ,Inc New York,London 1994.**

2. List Essential References Materials :

- **The basic principles in the spectra of organic compounds " Hassan Mohammed al-Hazmi, Salem Schoeman Alchwimman Library Khuraiji,1986.**

3. List Recommended Textbooks and Reference Material :

- **Journal of Saudi Chemical society**
- **Arabian journal of chemistry**

4. List Electronic Materials :

- **www.googel.com.**
- **http://en.wikipedia.org/wiki/Organic_chemistry**
- **www.Spriger .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	Department Head
Name : Nawal Mahgoub	***Name :*** .....
Signature : 	***Signature :*** .....
Date : 15 / 12 / 1435 *H*	***Date :*** …./ … / …… *H*