جامعة المجمعة
Majmaah University

Course Specifications

Institution:	Collage of Education -Zulfi
Academic Department :	Chemistry
Programme :	Chemistry
Course :	Physical organic chemistry CHEM 224
Course Coordinator :	Nawal Mahgoub Suleman
Programme Coordinator :	.....
Course Specification Approved Date :	15/ 12 / 1435 H

This form compatible with NCAAA 2013 Edition

A. Course Identification and General Information

1 - Course title : Physical organic chemistry	Course Code: CH (M 22
2. Credit hours : 2	
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 : fourth 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 :

.....

B Objectives

What is the main purpose for this course?

To know free energy relations (Hammat and Taffet equations)
-Applications in the field of study of electronic effects of replaced groups

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
Electronic effect and free energy relations (Hammat and Taffet equations)	6	12
Physical and chemical methods :to know a reaction (study of reaction products , study of reaction kinetics (order),detection of reaction intermediate (carbonium, carbanion, free radical,addition intermediate have pyramid quartet form	4	8
Physical and chemical methods to a mechanism know a reaction: study of electronic effects of replaced groups (induced ,resonance , up conjugation , Stereochemistry ,use of isotopes ,study of sort of catalyst)	5	10

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

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	2	-	-	-	-	2
Credit	2	-	-	-	-	2

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 : relations between electronic effects of replaced groups and free energy**	lecture	Written and oral tests.
1.2	**Can write Hammat and Taffet equations)**	**lecture**	**Written and oral tests.**
١.٣	**Can listed the different reaction intermediates**	lecture	Written and oral tests.
١.٤	**Describe the effect of giving and withdrawing groups on the acidity of organic acids**	lecture	Written and oral tests.
١.٥	**Defines resonance and hyperconjugation effects**	lecture	Written and oral tests.
١.٦	**Remember the rules for group electronic effects on phenol acidity**	lecture	Written and oral tests.
2.0	**Cognitive Skills**		
2.1	**Can rewrite Hammat and Taffet equations)**	lecture	Written and oral tests.
2.2	**Can apply rules of Hammat equations at different compounds**	lecture	Written and oral tests.
٢.٣	**The distinction between different types of reactions intermediates**	lecture	Written and oral tests.
٢.٤	**applications of some conclusions**	lecture	Written and oral tests.
٢.٥	-	-	-
٢.٦	-	-	-
3.0	**Interpersonal Skills & Responsibility**		
3.1	**Solving some of the exercises in groups**	lecture	Written and oral tests.
3.2	**Doing a search as a group**	lecture	Written and oral tests.
٣.٣	**write the equations of the interaction of materials under study alone**	lecture	Written and oral tests.
٣.٤	-	-	-
٣.٥	-	-	-
٣.٦	-	-	-
4.0	**Communication, Information Technology, Numerical**		

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
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**	lecture	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	-	-	-
5.2	-	-	-
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 theoretical test**	18	60%
5	-	-	-
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 :

- "Physical Organic Chemistry," Abdul Aziz Mohiuddin Khoja, Ahmed Sami Abdul Shakoor Hwala, King Abdul Aziz University, 1985
- "Mechanics of organic reactions," Salim bin Schoeman and others, Deanship of Library Affairs, King Saud University, Riyadh 1407/1987
- Entrance to the mechanics of organic reactions, "D.alsidik Abdullah Obaid and Dr. Ali Mohammed cobra, University Publications, October 6, Libya, 2010

2. List Essential References Materials :

- "Physical Organic Chemistry," Abdul Aziz Mohiuddin Khoja, Ahmed Sami Abdul Shakoor Hwala, King Abdul Aziz University, 1985
- "Mechanics of organic reactions," Salim bin Schoeman and others, Deanship of Library Affairs, King Saud University, Riyadh 1407/1987
- Entrance to the mechanics of organic reactions, "D.alsidik Abdullah Obaid and Dr. Ali Mohammed cobra, University Publications, October6,Libya,2010

3. List Recommended Textbooks and Reference Material :

- Journal of Saudi Chemical society

4. List Electronic Materials :

- www.googel.com.
- http://en.wikipedia.org/wiki/Organic_chemistry
- www.Spriger .com
- http://www.organic-chemistry.org
- http://www.chemhelper.com/mechanisms.html

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

2. Computing resources • **Laptop faculty member**.
3. Other resources • -

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 teachers.** • **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
Signature :	
Date :	15 / 12 / 1435 *H*

Name :	.....
Signature :	.....
Date :	…./ … / …… *H*