



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 :	Gehan Alaemary.
Course Specification Approved Date :	28/ 12 / 1436 H□



A. Course Identification and General Information

1 - Course title : <input type="text"/> <input type="text"/> <input type="text"/>	Course Code: <input type="text"/> (<input type="text"/> - <input type="text"/>)
2. Credit hours : 2 <input type="text"/>	
3 - Program(s) in which the course is offered: Chemistry	
4 – Course Language : English	
5 - Name of faculty member responsible for the course: . <input type="text"/> - <input type="text"/>	
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) : - <input type="text"/>	
9 - Location if not on main campus : (-)	
10 - Mode of Instruction (mark all that apply) <input type="checkbox"/>	
A - Traditional classroom <input type="checkbox"/>	<input checked="" type="checkbox"/> What percentage? <input type="checkbox"/> 20% <input type="checkbox"/>
B - Blended (traditional and online) <input type="checkbox"/>	<input type="checkbox"/> What percentage? <input type="checkbox"/> % <input type="checkbox"/>
D - e-learning <input type="checkbox"/>	<input checked="" type="checkbox"/> What percentage? <input type="checkbox"/> 80% <input type="checkbox"/>
E - Correspondence <input type="checkbox"/>	<input type="checkbox"/> What percentage? <input type="checkbox"/>% <input type="checkbox"/>
F - Other <input type="checkbox"/>	<input type="checkbox"/> What percentage? <input type="checkbox"/> % <input type="checkbox"/>
Comments : <input type="checkbox"/>	

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 (Hammett and Taft 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

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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 Hammett and Taft equations)	lecture	Written and oral tests.
1.3	Can listed the different reaction intermediates	lecture	Written and oral tests.
1.4	Describe the effect of giving and withdrawing groups on the acidity of organic acids	lecture	Written and oral tests.
1.5	Defines resonance and hyperconjugation effects	lecture	Written and oral tests.
1.6	Remember the rules for group electronic effects on phenol acidity	lecture	Written and oral tests.
2.0	Cognitive Skills		
2.1	Can rewrite Hammett and Taft equations)	lecture	Written and oral tests.
2.2	Can apply rules of Hammett equations at different compounds	lecture	Written and oral tests.
2.3	The distinction between different types of reactions intermediates	lecture	Written and oral tests.
2.4	applications of some conclusions	lecture	Written and oral tests.
2.5	-	-	-
2.6	-	-	-
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.
3.3	write the equations of the interaction of materials under study alone	lecture	Written and oral tests.
3.4	-	-	-
3.5	-	-	-
3.6	-	-	-
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.
4.3	Research in the form of PowerPoint	Discussion	Written and oral tests.
4.4	Homework through the D2l program	E-learning	Written and oral tests.
4.5	-	-	-
4.6	-	-	-
5.0	Psychomotor		
5.1	-	-	-
5.2	-	-	-
5.3	-	-	-
5.4	-	-	-
5.5	-	-	-
5.6	-	-	-

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

	Assessment task	Week Due	Proportion of Total Assessment
1	Oral and written exercises	weekly	10%
2	Search in the form of groups presented with PowerPoint	14	10%
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.google.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

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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 (3) Date 28 / 12 / 1436 H

Course's Coordinator

Department Head

Name :

Nawal Mahgoub

Name :

Gehan Alaemary.





Signature : *Nourah*

Signature :

Date : 28 / 12 / 1436 H

Date : 28 / 12 / 1436 H

