

## T6. Course Specification (CS)

### Practical preparation of organic compounds 343 chem- 2

Institution: Najran University	Date of Report: 12/9/1438H
College/Department : Sciences & Arts / Chemistry	

#### A. Course Identification and General Information:

1. Course title and code: Practical preparation of organic compounds 343 chem- 2			
2. Credit hours: <b>2 hours per week (0+2)( Theoretical + practical)</b>			
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)			
4. Name of faculty member responsible for the course: Dr/ Hanaa Farag			
5. Level/year at which this course is offered : level Fifth			
6. Pre-requisites for this course (if any): 240Chem -4 Organic chemistry(1)			
7. Co-requisites for this course (if any)-----			
8. Location if not on main campus : College of Science & Arts - University City			
9. Mode of Instruction (mark all that apply)			
a. Traditional classroom	<input checked="" type="checkbox"/>	What percentage?	<input type="text" value="100%"/>
b. Blended (traditional and online)	<input type="checkbox"/>	What percentage?	<input type="text"/>
c. e-learning	<input type="checkbox"/>	What percentage?	<input type="text"/>
d. Correspondence	<input type="checkbox"/>	What percentage?	<input type="text"/>
f. Other	<input type="checkbox"/>	What percentage?	<input type="text"/>
Comments:			

## B. Objectives

1. What is the main purpose for this course?

**Training the students on the methods of preparation some organic compounds for some reactions such as addition, hydrolysis, bromination, substitution, re-crystallization of the resulting compounds, ensure their purity through chromatography analysis (Thin layer analysis) and determination of melting point.**

2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)

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**1- Provide a sufficient number of necessary tools and modern equipment required in the preparation of organic compounds.**

**2 - Review the modern scientific journals to see the latest methods for the preparation of organic compounds**

**3 - The inclusion of some recent experiments within the types of organic interactions included in the aims.**

**4- Continuous updating of course content based on new scientific research in this field.**

**5- Directing the students to take advantage of internet sites and supply with updated information.**

C. Course Description (Note: General description in the form used in the Bulletin or handbook should be attached)

Course Description :

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact Hours
<b>-Learn about security and safety procedures and how to manage risks.</b>	1	4
<b>-Explain how to treat chemicals safely and use laboratory devices in a scientific way.</b>		
<b>-Identify how to make crystallization and measure the melting point of different compounds</b>	1	4
<b>Preparation of Acetanilide using Acetic anhydride</b>	1	4
<b>Preparation of <i>p</i>-Bromoacetanilide</b>	1	4
<b>Hydrolysis of <i>p</i>-Bromoacetanilide</b>	1	4

Preparation of <i>p</i> -Nitroacetanilide	1	4
Preparation of Aniline benzylidene	1	4
Preparation of AZO dye (1-phenyl-2-naphthol)	1	4
Preparation of Benzamide	1	4
Preparation of 1-Nitroso-2-Naphthol	1	4
Preparation of <i>p</i> -Nitroso-N, N-dimethylaniline	1	4
Preparation of Aspirin	1	4
Preparation of Soap	1	4
Preparation of Caffeine Salicylates	1	4
Revision	1	4
	15	60

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

	Lecture	Tutorial	Laboratory	Practical	Other:	Total
Contact Hours	----	----	60	-----	----	60
Credit	-----	--	2	-----	----	2

3-Additional private study/learning hours expected for students per week: **(10) hours**  
**6 hours Office and 4 hours of academic guidance per week .**

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
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1.0	<b>Knowledge</b> <b>- By the end of teaching the course, the student be able to</b>		
1-	Define the concepts of security, safety procedures, the types of reactions and crystallization	dialogue and discussion	Quarterly and final exams
2.0	<b>Cognitive Skills</b> <b>By the end of teaching the course, the student be able to</b>		
2.1	Explain the mechanics of interaction of the reactions under study	-Dialogue and discussion	Quarterly and final tests
2.2	Calculate the molecular weights and moles of the reacting, resulting compounds and the percentage of prepared products	-Dialogue and Learning lab -Training laboratory - Problem Solving	Quarterly and final tests
3.0	<b>Interpersonal Skills &amp; Responsibility</b> <b>-By the end of teaching the course, the student be able to</b>		
3.1	Cooperate with the students through teamwork	Cooperative learning	- File reports for prepared experiments
3.2	Depend on itself to conduct experiments	Self-learning	Quarterly and final tests
4.0	<b>Communication, Information Technology and Numerical Skills</b> <b>-By the end of teaching the course, the student be able to</b>		
4.1	- Use of computers in the collection of information and research work	-Self-learning - Cooperative learning	- Duties and research
4.2	Communicate with others in the team	-Training Laboratory -Problem solving	Duties and research
5.0	<b>Psychomotor</b> <b>By the end of teaching the course, the student be able to:</b>		
5.1	Use of chemicals in a safe manner and devices laboratory tools in a scientific way	Training laboratory	Observation and final exam

5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (e.g. essay, test, Quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	<b>The First Quarterly Test</b>	<b>6</b>	<b>20%</b>
2	<b>The Second Quarterly Test</b>	<b>9</b>	<b>20%</b>
3	<b>Duties and Activities</b>	<b>During the Semester</b>	<b>10%</b>

4	<b>Final tests</b>	<b>16</b>	<b>50% (40+10)</b>
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#### D. Student Academic Counseling and Support

. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)

- 1- Provide assistance and guidance for inquiries and consultations related to the course, which includes help students on understand the course and contribute to the process of academic guidance and help students in the face of any problems or study academy for the course.**
- 2- Communicate , ask questions and inquiries by students via e-mail through the university website and via Blackboard.**
- 3- Office hours recorded in the table of each faculty member and advertised for students ( 6) hour per week.**
- 3- Hours of academic guidance recorded in the schedule of each faculty member and advertised for students ( 4) hour per week.**

#### E. Learning Resources

1. List Required Textbooks – <b>Vogel's, Textbook of Practical Organic Chemistry , 5th ed.</b>
2. List Essential References Materials (Journals, Reports, etc.) - <b>Organic Chemistry Laboratory::</b> <b>Author: Dr. Fathi Salem Matouk, Dr.. Muhyiddin Baccouche, Dr. Mahdi Abdel-Salam, Dr. Mohammed Al-Fitouri and Dr. Mahbouba Bashir.</b>  - <b>Principles of Practical Chemistry:</b> <b>Author: Dr. Ahmed Medhat Islam, Dr.. Mr. Ali Hassan, Dr. Ismail and Dr. Ahmed Mohamed El Naggar</b>
3. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.) <b>Digital Library through the University of Najran University</b>  <b><u><a href="http://books.makktaba.com">http://books.makktaba.com</a></u></b>  <b><u><a href="http://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm">http://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/intro1.htm</a></u></b>
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.- - <b>Use the program of ISIS Draw for draw the structure of chemical compounds</b>

- Use the library to resolve duties
- Organic Chemistry CDs
- Electronic programs for the naming of organic compounds and methods of classification.

#### F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access etc.) -

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

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**-A good chemistry lab with lighting and ventilation and equipped with the latest technology.**

**-Number of students are not more than 30 classrooms.**

**Providing laboratories with computers and internet points.**

2. Computing resources (AV, data show, Smart Board, software, etc.)

**The provision of an appropriate number of computers, and devices of data show and the smart blackboard in the classrooms to the possibility of activating the educational strategies.**

**- Providing computer programs, especially the science of chemistry to train students to use.**

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

**-Equipping laboratories with the latest technologies and providing them with means of protection, security and safety.**

**- Maintenance of laboratories periodically to maintain the timeliness and to ensure security and safety.**

**- Provision of the necessary chemicals for laboratories periodically throughout the year.**

**- It is very important to provide a distillation of the water in each laboratory.**

#### G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

- feedback lecture after each quarterly test for the discussion of test questions

-A poll of students in their ability to achieve the outputs of Teaching

- Evaluation by applying poll students about the effectiveness of e-learning.

-Measurement of learning outcomes through tests

-Student questionnaire on the university website

- Evaluating the results of the students to measure the progress of students
2 Other Strategies for Evaluation of Teaching by the Program/Department Instructor
- Consult with colleagues with experience in the field of specialization
3 Processes for Improvement of Teaching
-Attendance of faculty member training courses and specialized workshops according to the requirements of their training.
- Hold meetings exchange of experiences between members of the faculty section
- Continuous updating of scientific material in the light of feedback from calendars and in accordance with the reference standards adopted for the program
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)
-Use the system of measure learning outcomes to verify students' familiarity with targeted learning outcomes
-Check random sample of student test papers by an independent faculty member.
- Follow the results of the students per two semesters and a comparison of the results to identify the main difficulties and problems.
- Observation and assistance from colleagues.
5 - Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.
-Tracking and comparing the results of the students.
-Follow-up and continuous assessment through quarterly assessment of the course and evaluating the performance of faculty members.
- Periodic review the contents of the course and modify the negatives on the basis of the results of evaluating course and students outcomes through the report of course.
- Review course consistently in line with the needs of job market.
- Attend training courses and workshops for teachers course.
- Claim the college administration to provide modern learning resources.

Name of instructor :**Hanaa Farag**

Signature: **Hanaa**

Date Report Completed: **12/9/1438H**

Name of field experience teaching staff **Dr. Naglaa Salah El-Deen, Dr. Amal Fathi**

Program coordinator : **Dr. Amal Fathi**

Signature:

Date received: \_\_\_\_\_