



**ATTACHMENT 2 (e)**

**Course Specifications**

**Kingdom of Saudi Arabia**

**The National Commission for Academic Accreditation & Assessment**

**Chemistry of detergents and pesticides**

**4024782-2**

**Course Specifications  
(CS)**





## Course Specifications

|   |                             |
|---|-----------------------------|
| Institution: <b>Umm Al-Qura University</b>                                      | Date of Report: <b>2017</b> |
| College/Department : <b>Faculty of Applied Science/ Department of Chemistry</b> |                             |

### A. Course Identification and General Information

|   |  |
|---|--|
| 1. Course title and code: <b>Chemistry of detergents and pesticides/ 4024782-2</b>                      |  |
| 2. Credit hours: <b>2 hrs (theoretical)</b>   |  |
| 3. Program(s) in which the course is offered: <b>Industrial Chemistry</b>                               |  |
| 4. Name of faculty member responsible for the course: <b>Dr. Refaat Alsayed</b>                         |  |
| 5. Level/year at which this course is offered: <b>8<sup>th</sup> level/4 year (2<sup>nd</sup> term)</b> |  |
| 6. Pre-requisites for this course (if any): <b>heterocyclic Chemistry</b>                               |  |
| 7. Co-requisites for this course (if any): -----  |  |
| 8. Location if not on main campus: <b>El-Abdyah</b>   |  |
| 9. Mode of Instruction (mark all that apply)  |  |
| a. Traditional classroom  | <input checked="" type="checkbox"/> What percentage? <b>100%</b>   |
| b. Blended (traditional and online)   | <input type="checkbox"/> What percentage?                          |
| c. e-learning   | <input type="checkbox"/> What percentage? <input type="checkbox"/> |
| d. Correspondence   | <input type="checkbox"/> What percentage? <input type="checkbox"/> |
| f. Other  | <input type="checkbox"/> What percentage? <input type="checkbox"/> |
| Comments:   |  |



## B Objectives

|   |
|---|
| <p><b>1. What is the main purpose for this course?</b><br/>By the end of this course student will be familiar with Studying of detergents, pesticides and definition of different types of them</p>   |
| <p><b>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)</b><br/>The students will be mentioned to prepare an essay or a report from literature using the library, data base services, and/or websites to follow up and update the new topics of the subject of the course</p> |

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

| 1. Topics to be Covered   |              |               |
|---|--------------|---------------|
| List of Topics  | No. of Weeks | Contact Hours |
| a- Introduction to Industrial Chemistry, Oils and Fats  | 1            | 2             |
| b- Identification of the different types of detergents and methods of the preparation   | 2            | 4             |
| c- Soaps and products – saponification – the preparation of the final products of soap (soap molds – fabrics or tissue washing powders) | 2            | 4             |
| d- Tissue products (candida – enzymes – foam)   | 2            | 4             |
| e- Identification of the different types for natural and industrial pesticides with their names: pesticides, weeds and fungi            | 3            | 4             |
| f- Chemicals, which uses in insects, plants and microorganisms  | 2            | 4             |
| g- Recognize of the risks for using the pesticides  | 2            | 4             |





|  |         |          |            |           |        |       |
|--|---------|----------|------------|-----------|--------|-------|
| 2. Course components (total contact hours and credits per semester): |         |          |            |           |        |       |
|  | Lecture | Tutorial | Laboratory | Practical | Other: | Total |
| Contact Hours  | 28      | -        |            | -         |        | 28    |
| Credit   | 2       | -        |            | -         |        | 2     |

|   |
|---|
| 3. Additional private study/learning hours expected for students per week. <input type="text"/> |
|---|

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

|            | NQF Learning Domains<br>And Course Learning Outcomes  | Course<br>Teaching<br>Strategies   | Course<br>Assessment<br>Methods  |
|------------|---|--|--|
| <b>1.0</b> | <b>Knowledge</b>  |  |  |
| 1.1        | Studying the definition and properties of detergents and pesticides   | <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Scientific discussion</li> <li>• Library visits</li> <li>• Web-based study</li> </ul> | <ul style="list-style-type: none"> <li>• Exams</li> <li>• web-based student performance systems</li> <li>• portfolios</li> <li>• long and short essays</li> </ul>            |
| 1.2        | Describing the classification of surface active agents  |  |  |
| 1.3        | Knowledge of different types of detergents and their uses   |  |  |
| 1.4        | Showing the multiple methods of preparation of detergents   |  |  |
| 1.5        | Recognizing the chemical properties and uses of pesticides  |  |  |
| 1.6        | Identifying the chemicals which uses in insects, plants and microorganism   |  |  |
| <b>2.0</b> | <b>Cognitive Skills</b>   |  |  |
| 2.1        | Development of reverse thinking skill (back thinking) and the student's acquiring the training skill to choose the suitable method for detergents preparation | <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Scientific discussion</li> <li>• Library visits</li> <li>• Web-based study</li> </ul> | <ul style="list-style-type: none"> <li>• Exams</li> <li>• web-based student performance systems</li> <li>• portfolios</li> <li>• posters</li> <li>• demonstration</li> </ul> |
| 2.2        | Making the student acquire the skill of naming detergents and pesticides  |  |  |
| 2.3        | The student's acquiring of the skill of how to predict the outcomes of interactions of organic compounds by light   |  |  |
| 2.4        | The student can pick the appropriate methods for the  |  |  |



|            |  |  |   |
|------------|--|--|---|
|            | preparation of different soap molds, tissue washing  |  | s   |
| 2.5        | Design of different ways to synthesize several types of detergents   |  |   |
| 2.6        | Student invents different ideas for the construction of many of the different organic compounds with interested effect   |  |   |
| 2.7        | The student is planning to make a research program in the field of advanced organic chemistry and their effectiveness  |  |   |
| <b>3.0</b> | <b>Interpersonal Skills &amp; Responsibility</b>   |  |   |
|            | <ul style="list-style-type: none"> <li>Present chemical data orally.</li> <li>Know how to write a report.</li> <li>Self-reliance and take individual responsibility and the ability to work within the group</li> </ul>  | <ul style="list-style-type: none"> <li>* Scientific discussion</li> <li>* Web-based study</li> </ul>   | <ul style="list-style-type: none"> <li>• web-based student performance systems</li> </ul>   |
| <b>4.0</b> | <b>Communication, Information Technology, Numerical</b>  |  |   |
|            | <ul style="list-style-type: none"> <li>The ability to conduct a successful style of dealing with data analysis, describing his strategy in the image and draw conclusions from them</li> <li>use the computer and the internet to search for sources of new researches and collect the researches which help in writing reports on topics related to syllabus</li> </ul> | <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Scientific discussion</li> <li>• Library visits</li> <li>• Web-based study</li> </ul> | <ul style="list-style-type: none"> <li>• web-based student performance systems</li> <li>• individual and group presentations</li> </ul> |
|            |  |  |   |
| <b>5.0</b> | <b>Psychomotor</b>   |  |   |
| 5.1        | NOT APPLICABLE   |  |   |
| 5.2        |  |  |   |

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

|   | Assessment task (e.g. essay, test, group project, examination, speech, oral presentation, etc.) | Week Due | Proportion of Total Assessment |
|---|---|----------|--------------------------------|
| 1 | Homework or activities.   | --       | 10 %                           |
| 2 | First Periodic Exam.  | 6        | 20 %                           |
| 3 | Second Periodic Exam.   | 12       | 20 %                           |
| 4 | Final Exam. (2hours exam)   | 16       | 50 %                           |
| 5 | <b>Total</b>  |          | <b>100 %</b>                   |



## D. Student Academic Counseling and Support

1. 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)

- **We have faculty members to provide counseling and advice.**
- **Office hours: During the working hours weekly.**
- **Academic Advising for students.**

## E. Learning Resources

### 1. List Required Textbooks

- P. K. Chattopadhyay. Modern Technology of Soaps, Detergents & Toiletries (with Formulae & Project Profiles) 3<sup>rd</sup> Edition. Niir Project, (2015).
- K.L. Heong, K.H. Tan, C.P.F. Garcia, L.T. Fabellar, and Z. Lu. Research Methods in Toxicology and Insecticide Resistance Monitoring of Rice Planthoppers. Copyright International Rice Research Institute (2011).

### 2. List Essential References Materials (Journals, Reports, etc.)

- Lecture Hand outs available on the coordinator website

### 3. List Recommended Textbooks and Reference Material (Journals, Reports, etc)

- “Everyday Chemistry – Why Oil and Water do not mix?.” Everyday Chemistry – Why Oil and Water do not mix?. N.p., n.d. Web. 16 Aug. 2014. <http://human touch of chemistry.com/why-oil-and-water-do-not-mix.htm>
- A Osorio, M.D. Insecticides, Rodenticides & Herbicides. USF Emergency Medicine Residen PGY II April 10<sup>th</sup> (2009).
- A A Ahamed. Public health hazard of antibiotic and insecticide treatments of livestock .Review article , submitted to continual . Scientific committee of hygiene , Nutrition , Animal husbandry and food control (2004).
- Niir Board of Consultants & Engineers. The complete technology book on detergents (2nd revised edition 2013) ISBN: 978-93-81039-19-9

### 4. List Electronic Materials (eg. Web Sites, Social Media, Blackboard, etc.)

- <http://www.chemweb.com>
- <http://www.sciencedirect.com>
- <http://www.rsc.org>



5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

## F. Facilities Required

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

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

- **Classrooms capacity (30) students.**
- **Providing hall of teaching aids including computers and projector.**

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

- **Room equipped with computer and projector and TV.**

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

- **No other requirements.**

## G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching  
Complete the questionnaire evaluation of the course in particular.

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

- **Observations and the assistance of colleagues.**
- **Independent evaluation for extent to achieve students the standards.**
- **Independent advice of the duties and tasks.**

3 Processes for Improvement of Teaching

- **Workshops for teaching methods.**
- **Continuous training of member staff.**
- **Review of strategies proposed.**
- **Providing new tools for learning.**
- **The application of e-learning.**
- **Exchange of experiences internal and external.**



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)

- **Check marking of a sample of exam papers, or student work.**
- **Exchange corrected sample of assignments or exam basis with another staff member for the same course in other faculty.**

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

- **Periodic Review of the contents of the syllabus and modify the negatives.**
- **Consult other staff of the course.**
- **Hosting a visiting staff to evaluate of the course.**
- **Workshops for teachers of the course.**

Faculty or Teaching Staff: Dr. Refaat Alsayed

Signature: 

Date Report Completed: 12/1/2019

Received by: Dr Ismail I. Althagafi Department Head

Signature: 

Date: 20/1/2019

