

University of Petra

Faculty of Arts & Sciences  
Department of Chemistry



كلية الآداب والعلوم  
قسم الكيمياء

## Course Syllabus

Year: 2018/2019

Semester: Second

Course No.	Course Title	Prerequisite	Co-requisite	Credit Hours / ECTS
101448	Graduation project	101445 + 99 credit hours	-	2/ 8

Instructor Name	e-mail	Office No.	Office ext.	Office Hours
Dr. Abdelmnim Altwaiq	aaltweiq@uop.edu.jo	6500	6500	Sun, Tue, Thu: 9-10 Mon, Wed: 11-12

Coordinator's Name: (if applicable)	Dr. Abdelmnim Altwaiq
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Course Description	Research project, including literature survey under the supervision of departmental staff members. Students should learn how to apply tools and concepts of conducting research activities. A joint research project with local industries may be arranged.
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### Course Objectives

1. The student should conduct experiments or make a training in a chemical company.
2. The student should present a seminar on his research or training topic
3. To search and access chemical information in internet and literature survey in chemistry data bases.
4. To provide students with a knowledge and skills base from which they can proceed to further studies in specialized areas of chemistry or multi-disciplinary areas involving chemistry.

### Course Intended Learning Outcomes (ILOs) and their Alignment with Program ILOs, Teaching and Learning Methods, and Assessment Methods:

Upon successful completion of this course, students are expected to achieve the following learning outcomes:

Course ILOs	Program ILOs	Teaching and Learning Method	Assessment Method	
<b>Knowledge (K)</b>				
<b>K1:</b> Demonstrate knowledge and understanding of essential facts, concepts, principles and theories, perform experiments and find suitable industrial applications related to organic, inorganic, and analytical and physical chemistry.	<b>K1</b>	Report and presentation	<b>Report on the experiments discovery and making oral presentation</b>	
<b>Intellectual Skills (I)</b>				
<b>I1:</b> Explain the nature and behavior of chemical compounds, their classification, chemical structure, reactivity, mechanisms, physical properties, and characterizations using different techniques.	<b>I1</b>	Report and presentation		
<b>I2:</b> Estimate chemical data by performing calculations and derivation related to general, analytical, physical, organic and inorganic chemistry.	<b>I2</b>	lab experiments		
<b>Transferable Skills (T)</b>				
<b>T1:</b> Communication skills, covering both written and oral communication.	<b>T1</b>	Report and presentation		
<b>T2:</b> Problem-solving skills, relating to qualitative and quantitative information, extending to situations where evaluations have to be made on the basis of limited information.	<b>T2</b>	Report and presentation		
<b>Practical Skills (P)</b>				
<b>P2:</b> Appreciate the importance of carrying out careful and precise measurements to generate reliable data.	<b>P2</b>	lab experiments		
<b>P3:</b> Prepare and separate compounds and analyze substances.	<b>P3</b>	lab experiments		
<b>P4:</b> Prepare scientific reports and make oral presentations.	<b>P4</b>	Report		
<b>P5:</b> Use the scientific literature effectively and demonstrating scholarship in their research.	<b>P5</b>	Report		

**Course Schedule:**

Week	Topic Details	Course ILO number	Reference
1	Choosing research project together with the supervisor	All	

2	The concepts of scientific research and literature survey	All	Reference 1
3	The rules of citation , copy writes and plagiarism	All	Reference 1, 2
4	Visiting the university library to explore the periodicals and data bases (EBSCO, Sci-finder, Ebrary)	All	To be chosen according to the topic
5	Perform experiments or training	All	
6	Perform experiments or training	All	
7	Perform experiments or training	All	
8	Perform experiments or training	All	
9	Perform experiments or training	All	
10	Perform experiments or training	All	
11	Perform experiments or training	All	
12	Perform experiments or training	All	
13	Collect the data and writing the report	All	
14	Preparing the presentation	All	
15	Presenting the report	All	

### Assessment Methods:

Assessment method	Grade	Comments
Semester work	30	
Thesis	30	
Final Exam and presentation	40	
<b>Total</b>	<b>100</b>	

### Learning References:

#### **1- Textbook (s):**

To be chosen according to the topic

#### **2- References:**

1. The Art of Scientific Writing: From Student Reports to Professional Publications in Chemistry and Related Fields, 2<sup>nd</sup> edition, by Hans F. Ebel, Claus Bliefert and William E. Russey, 2004.

#### **3- Other Resources:**

Research Laboratory, Library and Computer labs, course notes.

### **Course Policies**<sup>1</sup>

- Attendance Policy: University regulations apply to attendance.
- Academic Honesty: Academic dishonesty is an unacceptable mode of conduct, and will not be tolerated in any form at University of Petra. All persons involved in academic dishonesty and plagiarism in any form will be disciplined in accordance with University rules and regulations.

<b>Approved by</b>	<b>Name</b>	<b>Date</b>	<b>Signature</b>
<b>Head of Department</b>	Dr. Abdelmnim Altwaiq	24.02.2019	
<b>Faculty Dean</b>	Prof. Rami Abdel-Rahem	26.02.2019	

**Controlled  
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<sup>1</sup> Additional information may be added in this section according to the nature of the course.