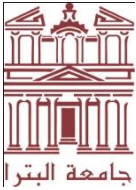
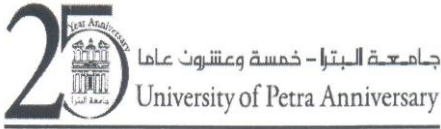


University of Petra		
Faculty of Arts and Sciences		كلية الآداب والعلوم
Department of Chemistry		قسم الكيمياء

Course Syllabus

Year : 2018/2019

Semester: 20182

Course No.	Course Title	Prerequisite	Co-requisite	Credit Hours Lectures / Lab.	ECTS
101453/1	Petroleum Chemistry	101212	-	3/-	5

Instructor Name	E-mail	Office No.	Office Ext.	Office Hours
Dr. Nabil Eldurini	nabild@uop.edu.jo	7111	7111	Sun, Tue, Thu, 10.00 – 11.00 Mon, 11.00 – 14.00

Coordinator's Name: (if applicable)	-
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Course Description	Energy and thermal units, petroleum products and their industrial uses, Refinery processes as sources for petrochemicals, other sources of petroleum, and chemical processes based on petrochemicals.
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Course Objectives:

- To instill in students a sense of enthusiasm for Petroleum chemistry and petroleum industries, an appreciation of its application in different contexts and to involve them in an intellectually stimulating and satisfying experience of learning and studying.
- To develop in students the ability to apply their chemical knowledge and skills to the solution of theoretical and practical problems in chemical industry.
- To provide students with a knowledge and skills base from which they can proceed to further studies in specialized areas of industrial chemistry or multi-disciplinary areas involving petroleum chemistry.
- To generate in students an appreciation of the importance of and petroleum industries in an economic, environmental and social context.

Intended Learning Outcomes (ILO'S):

Successful completion of this module should lead to the following learning outcomes:

Course ILOs	Program ILOs	Teaching and Learning Method	Assessment Method
Knowledge and Understanding (K): By the end of the course students should be able to:			
1. Identify major principles and concepts in petroleum industry.	K1	Lectures using data show and Models	Exams
2 Name and Categorize different types of petroleum constituents.	K2	Lectures using data show	Exams
Intellectual Skills (I): By the end of the course students should be able to:			
1. Recognize different sources and types of petroleum products.	I1	Lectures using data show	Exams
2. Correlate different petroleum products with their specific functions.	I2	Lectures using data show	Exams
3. Use physical and chemical processes in petroleum industry.	I2	Lectures using data show	Exams

Course Schedule:

Week	Topics	Course ILO number	References
1, 2	Energy and Raw Material Supply: Various Aspects of the Energy and Raw Material Supply: Availability of individual sources; Present and predictable energy requirements; Oil; Natural gas; Coal.	K1, I2	Chapter 1
3, 4, 5	Refinery processes: Physical Processes (UO) or Unit Operation; Chemical Processes (Chem) or Unit Processes; Conversion of Petroleum into Purified Chemical Substances; Types of Refinery Reactions; Octane Number.	K1, K2, I3	Chapter 2
6, 7, 8, 9	Products of Industrial Synthesis: Classification and Rank of Coal; Classification of Synthesis Gas; Synthesis gas via Coal Gassification: Winkler Process; Koopers-Totzek Process; Lurgi Pressure Gasification Process; ICI Process; Petrochemical Process.	K1, K2, I1, I3	Chapter 3
10, 11, 12, 13, 14	Petrochemical Products: Methanol Production and its Applications; Formaldehyde Production and its Applications; Halogen Derivatives of Methane; Olefins: Ethylene; Propene; Butenes.	K1, K2, I1, I2	Chapter 4

Assessment Methods:

Assessment method	Grade	Comments
First Exam	25	(Sun) 24/03/2019
Second Exam	25	(Sun) 05/05/2019
Term Paper	10	Throughout the course
Final Exam	40	Set by Registrar
Total	100	

Alignment of Teaching and Learning Methods, Assessment and Course ILOs:

Teaching method	Contact Hours	Assessed through	ILOs numbers
Lectures	42	Exams and Term Paper	All ILOs

Learning References:

- 1- Industrial Organic Chemistry by. Klaus Weissermel and Hans J. Arpe, VCH Publishers, 1997.
- 2- Petroleum Chemistry, by Dr. Nabil Eldurini, Bookshop.

Course Policies:

- **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.

Approved by	Name	Date	Signature
Head of Department	Dr. Abdelmnim Al Tweiq		
Faculty Dean	Prof. Rami Abdulrahim		