Faculty of Engineering & Technology

Petroleum Refining Engineering

Information :

Course Code :	PE 306	**Level :**	Undergraduate	**Course Hours :**	1.00- Hours

Department : Department of Petroleum Engineering

Instructor Information :

Title	Name	Office hours
Associate Professor	Tarek Mohamed Aboul Fotoh Mohamed	5

Area Of Study :

To prepare the Petroleum Engineering students to participate in the expanding Petroleum Industry especially with respect to Natural Gas & Petrochemical Processing

Description :

Crude oil fractionation, Details of the design of Atmospheric and Vacuum distillation Columns, Basic petroleum fractions from AD/AV complex, Refinery Gases, Gasoline Specifications and use in Internal Combustion Engines, ignition quality of gasoline, Pre-ignition and Detonation, Mechanism of Detonation, Naphtha Specification and uses, Aviation Turbine Fuel, Kerosene specifications (uses and production of Linear Alkyl Benzene LAB), Gas Oil and Diesel Fuel, Fuel oil and Asphalt specifications and uses, Wax distillates production, Manufacture of lubricating oils, Theory of friction and Lubrication, Manufacture of grease, Complex refinery schemes for processing of Natural Gas and crude oil, dehydration, desulphurization, Cracking and reforming Operations.

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Petroleum industry and methods used in petroleum refining.
2 -	Comprehensive knowledge of the Natural gas Industry as a whole
3 -	Basic concepts of petrochemicals industry.
b.Intellectual Skills: :	
1 -	Collect data, and interpret data derived from laboratory observation.
2 -	Summarize and select the appropriate techniques relevant to different industries.
c.Professional and Practical Skills: :	
1 -	Identify major problems in petrochemicals plants.
2 -	Demonstrate a comprehensive understanding of design methodologies related to chemical engineering
d.General and Transferable Skills: :	
1 -	Use scientific evidence based methods in the solution of problems
2 -	Work effectively as a team member

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
Introduction to Petroleum Refining	2	1	0
Crude Oil -Physical Properties and Chemical composition	2	1	0
Crude oil Classification	2	1	0
Transportation	2	1	0
Refining Operations	2	1	0
Petroleum Gases	2	1	0
Gasoline	2	1	0

Teaching And Learning Methodologies :

Lectures & Discussions

Data & Information collection

Power point presentations

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Assignments, report	10.00	12	Course understanding
attendance	10.00	1	
Final exam	40.00	14	Comprehensive understanding of the Course
midterm-1	20.00	5	Course understanding
midterm-2	20.00	10	Course understanding

Course Notes :

Available on pdf files

Recommended books :

non

Periodicals :

non

Web Sites :

non