

Module (Course Syllabus) Catalogue
2022-2023

College/ Institute	Koya Technical Institute		
Department	Petroleum Technology – Chemical Analysis (Morning)		
Module Name	Practical Petroleum Refinery		
Module Code	PER403		
Degree	Technical Diploma ✓ Master PhD	Bachelor	High Diploma
Semester	4		
Qualification	Master		
Scientific Title	Lecturer Assistant		
ECTS (Credits)	6		
Module type	Prerequisite	Core ✓	Assist.
Weekly hours	2		
Weekly hours (Theory)	(0)hr Class	(0)Total hrs Workload	
Weekly hours (Practical)	(2)hr Class	(75)Total hrs Workload	
Number of Weeks	16		
Lecturer (Theory)	Sheeraz Majeed Ameen		
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Lecturer (Practical)	Sardasht Rifaat Taher		
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Course Catalogue

Course Description	<p>This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the program specification.</p>
Course Objectives	<p>Course intended for semester (3)- second 2nd stage students in Petroleum Technology-Chemical Analysis department.</p> <p>The course provides the student with a basic knowledge and understanding of the practical methods used in evaluation and improvement quality of petroleum refining products like (gasoline, kerosene, gasoil andetc), including technical aspects and impact on society and the environment.</p> <p>The course gives deep idea about composition, chemistry, classification, formations, and products of petroleum refining. Finally, the course involves in all testes that needs for evaluation of petroleum and its products. At the end of the course, the student should be able to speak in a general way on all aspects of the petroleum refinery and refining industry and be familiar with common refining Lab. tests.</p>
Student's obligation	<ol style="list-style-type: none">1) Students must restrict by time of practical lab.2) Students must participate in lab. By working, asking, answering question, explaining their opinions and suggestions.3) Restricted by laws of working in Lab.4) Working carefully with Lab. Equipment's and restrict by cleaning lab.5) Participate in all exams of the subject without absenting.6) Discusses students' suggestions, opinions and questions at teacher office hours.7) Preparing reports, seminars and other activates.

Required Learning Materials	1 White board.
	2 White board pen.
	3 Data Show.
	4 Power point presentation.
	5 Papers and Posters.
	6 Lab. Equipment.

Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review	---			
	Assignments	Homework	4		
		Class Activity	---		
		Report	4		
		Seminar	---		
		Essay	---		
		Project	---		
	Quiz	2			
	Lab.	10			
	Midterm Exam	16			
	Final Exam	20			
Total	46				

Specific learning outcome:	1 Importance of practical part of subject.
	2 Importance of introducing different methods for evaluating oil.
	3 Study physical and chemical prosperities of each class oil products.
	4 Methods of improvement of oil products quality.
	5 Knowledge about most important technique and methods used in Lab.
	6 Knowledge about (ASTM) sheets and preparing La. report

Course References	<ul style="list-style-type: none"> * The Chemistry and Technology Petroleum - FOURTH EDITION by JAMES G. SPEIGHT- Laramie, Wyoming. * Characterization and Properties of Petroleum- Fractions- M. R. Riazi. * Oil and Gas Property Evaluation- John D. Wright
	*Magazines and review (internet):
	1 www.elsevier.com/books/book-series/handbook-of-petroleum-exploration-and-production
	2 https://www.slideshare.net/search/slideshow?searchfrom=header&q=oil+and+gas+industry

Practical Topics	Week	Learning Outcome
Standard Test Method for Distillation of Petroleum Products and Liquid Fuels at Atmospheric Pressure	1	
Standard Test Method for Measuring Gasoline Octane Numb	2	
Standard Test Method for Vapor Pressure of Petroleum Reid Method (Reid Vapor Pressure RVP)	3	
Standard Test Method for measuring ethanol in Petroleum gasoline.	4	
Standard method for determining Copper strip Corrosion @ 37.8°C	5	
Standard Test Method for Refractive Index (RI) of Petroleum Products	6	
Scientific Trip to Oil Refinery	7	
Standard Test Method for Measuring Diesel Cetane Number	8	
Standard Test Methods for Aniline Point and Mixed Aniline Point of Petroleum Products and Hydrocarbon.	9	
Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy Dispersive X-ray Fluorescence Spectrometry1	10 - 11	
Standard Test Method for Water in Petroleum Products and Bituminous Materials by Distillation	12	Dean Stark Method
Standard Test Method for Salts in Crude Oil (Electrometric Method	13	
Scientific Trip to Oil Refinery	14	

* Practical Part

* Examinations

Q¹ / define the following: (Only 1) [----- 1]

Q² / answer the following: (Only 1) [----- 1]

Q³ In lab. Crude oil sample prepared for determining (water) percentage by Dean Stark method we gate the following information: [----- 1]

Q⁴ /Write complete procedure of the following tests (Only 1) [----- 1]

* Practical Test

Repeat one of the experiments in the laboratory

* Extra notes:

* External Evaluator

I confirmed that the contents of this syllabus are commonly more explicit and follows the principles and rules in Oil and Gas Properties subjects.

Lecturer: Dr. Kardo Sardar Muhammad