

Module (Course Syllabus) Catalogue 2022-2023

College/ Institute	Koya Technical Institute	
Department	Petroleum technology/Chemical Analysis	
Module Name	Health Safety & Environment	
Module Code		
Degree	Technical Diploma <input checked="" type="checkbox"/> Diploma <input type="checkbox"/> ster	Bachelor <input type="checkbox"/> PhD <input type="checkbox"/> High
Semester	3	
Qualification	Diploma	
Scientific Title	Assist. Lecturer	
ECTS (Credits)	5	
Module type	Prerequisite <input type="checkbox"/> Core <input type="checkbox"/> Assist. <input checked="" type="checkbox"/>	
Weekly hours		
Weekly hours (Theory)	(3)hr Class	(125)Total hrs Workload
Weekly hours (Practical)	()hr Class	()Total hrs Workload
Number of Weeks	16	
Lecturer (Theory)	sheeraz Majeed Ameen	

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Lecturer (Practical)	
E-Mail & Mobile NO.	
Websites	https://academicstaff.epu.edu.iq/faculty/sheeraz.ameen

Course Book

Course Description	<p>significance of HSE in the oil and gas industry now a day is becoming more and more predominant, especially when the case is all about a developing country that we live in. this course intends to propose a basic but not too detailed information about the concept of HSE and the related issues especially in the world of oil and gas industry. The ideologies and models of different HSE challenges will be discussed and deliberated to the students in a way that allows them to be equipped with sufficient information to enhance them in meeting with oil and gas company's expectation. Beside, this course is designed to allow and secure a participant an almost a guaranteed employment if they complete the course successfully.</p>
Course objectives	<p>Understand the conceptual and theoretical underpinning of the world of HSE. Study briefly about Health, Safety, and Environment HSE. Concepts of workplace HSE will be discussed and the importance of treatment. Concepts of as they related to the oil, gas, petrochemical and associated</p>

	industries. Students will develop an understanding of how businesses manage HSE and the regulatory responsibilities, and be able to prepare for further study in the field. Included is a historical perspective of the legislative process of regulations, explanation of HSE terms, ethics and professionalism, recordkeeping and HSE statistics, hazard recognition / evaluation / control, accident investigation and analysis, emergency preparedness, security, workers' compensation, concepts of pollution control, waste management, EIA, and HSE management systems.				
Student's obligation	Missed classes will not be compensated including the quizzes and the scheduled assignments. The students will lose marks on unattended classes with quizzes unless a legal document or authorized leave is presented which should explain the excuse of the absence. However, the absent student should take the responsibility for making up the missed lecture.				
Required Learning Materials	many useful tools will be used in this course to enhance the students to get better understanding including coloured markers, slideshows, white board, smart board, and hand-outs. In Theory lecture we use Data show to shown presentation (PPT), and White board to calculate the mathematical question				
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review				
	Assignments	Homework	10	2	
		Class Activity	2		
		Report	5	1	
		Seminar	5	1	
		Essay			
	Project				
	Quiz	8	4		
	Lab.				
	Midterm Exam	30			
	Final Exam	40			
Total	100				

Specific learning outcome:	This course book has been designed as a reference to acquaint you with the requirements of most oil and gas companies and assist you in compliance for the purpose of achieving incident-free performance. It is meant to provide you with a reference source for policies, safety rules, standards, procedures and guidelines that affect the safety and health of you and your co-workers	
Course References:	Benjamin O. ALLI, Fundamental principles of occupational health and safety. (2008) second edition, International Labour Organization Handi-guide to alberta's OH & S act, regulation and codes. (2014) Carswell, a division of Thomson reuters Canada limited Health and safety test. (2006) Thomson Prometric, printed in UK The Environmental Impact Assessment of petroleum operations, instruction No.1 (2014) Ministry of Natural Resources Technical Guideline on The Environmental Impact Assessment of petroleum operations in the Kurdistan Region of Iraq (2014) Ministry of Natural Resources	
Course topics (Theory)	Week	Learning Outcome
<ul style="list-style-type: none"> • Introduction to HSE 	1	What is HSE What are the HSE's main components Obligations
<ul style="list-style-type: none"> • Management and responsibilities 	2	Management responsibilities Person in Charge Responsibilities
<ul style="list-style-type: none"> • HSE Management System 	3	Almost all oil and gas companies intends to achieve a leadership position by implementing efficient and fullyeffective HSE practices. Increased Discipline, Clarity and Efficiency

		around Health, Safety & Environmental Compliance and Performance Integration of HSE into the way we do business
Fire Fighting and fire extinguishers	4	Fundamentals of extinguishing Types of extinguishers Fire prevention and control
<ul style="list-style-type: none"> H₂S safety 	5,6	H ₂ S release response H ₂ S first aids
Personal Protective equipment (PPE)	7,8	What are PPEs Why they are useful legal obligations types of PPE, Colors of PPE
Hazardous gases	9,10	Hazardous or poison gases that occur in petroleum refineries or industries or oil fields its effect and protection methods
Driving safety procedure	11	permit to operate according to HSE procedures vehicle check list drive safely
Safety and Environment laws in Kurdistan region-Iraq	12	Laws ,rules of Oil & Gas industries and refineries in Kurdistan
Practical Topics	Week	Learning Outcome
Report		

Seminar		

Questions Example Design

Q/Fill the spaces bellow by these given Terms:

(Benzene, Poly cyclic Aromatic Hydrocarbons, Sulfur Dioxide (SO₂) and Nitrogen Oxides (NO_x), Hydrogen sulfide (H₂S))

- 1- are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They also are produced when coal, oil, gas, wood, garbage, and tobacco are burned.
- 2-is a colour less, flammable, extremely hazardous gas
- 3- Mainly known as pollutants that can be produced primarily at coal powerplants
- 4-, as dangerous as it is, is one of the main petrochemical solvents used in oil production.

Q/ Define the following PPE (equipment that will protect the user against health or safety risks at work in Petroleum industrils

1-Hard Hats 2-Proximity Sensors 3-Body Shields 4-Earplugs and Earmuffs

Q /Indicate five Types of Hard Hat Color Codes & Their Meaning

Q/Write three effects of Benzene on human health:

Extra notes:

External Evaluator

I believe his lectures and plan for Health, Safety and Environment is very useful especially for whom who graduate this department. He covered his lecture and his plan is enough to be useful for student's future.

Sardasht Rifaat Taher