

Module (Course Syllabus) Catalogue 2023-2024

College/ Institute	ERBIL TECHNOLOGY COLLEGE	
Department	PETROLEUM TECHNOLOGY	
Module Name	HSE	
Module Code	HSE302	
Degree	Technical Diploma <input checked="" type="checkbox"/>	Bachelor <input type="checkbox"/>
	High Diploma <input type="checkbox"/>	Master <input type="checkbox"/> PhD <input type="checkbox"/>
Semester	SM3	
Qualification	MSc.	
Scientific Title	Assistant Lecturer	
ECTS (Credits)	5	
Module type	Prerequisite <input type="checkbox"/>	Core <input type="checkbox"/> Assist. <input checked="" type="checkbox"/>
Weekly hours	3	
Weekly hours (Theory)	(3)hr Class	(36)Total hrs Workload
Weekly hours (Practical)	()hr Class	()Total hrs Workload
Number of Weeks	16 weeks	
Lecturer (Theory)	Chia Hussain Abdoulqadir	
E-Mail & Mobile NO.	Chia.abdoulqadir@epu.edu.iq	
Lecturer (Practical)	N/A	
E-Mail & Mobile NO.	N/A	
Websites	Epu.edu.iq	

Course Book

Course Description	the 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. Besides, this course is designed to allow and secure a participant an almost a guaranteed employment if they complete the course successfully.
Course objectives	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 as they related to the oil, gas, petrochemical, and associated 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	<p>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.</p> <p>In Theory lecture we use Data show to shown presentation (PPT), and White board to calculate the mathematical question</p>				
Evaluation	Task	Weight (Marks)	Due Week	Relevant Learning Outcome	
	Paper Review				
	Assignments	Homework			
		Class Activity			
		Report	1	12	
		Seminar	1	14	
		Essay			
		Project			
	Quiz		8	Every week	
	Lab.				
	Midterm Exam		1	8	
	Final Exam		1	16	
Total					
Specific learning outcome:	<p>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</p>				
Course References:	<p>Benjamin O. ALLI, Fundamental principles of occupational health and safety. (2008) second edition, International Labour Organization</p> <p>Handi-guide to alberta's OH & S act, regulation and codes. (2014) Carswell, a division of Thomson reuters Canada limited</p>				

	<p>Health and safety test. (2006) Thomson Prometric, printed in UK</p> <p>The Environmental Impact Assessment of petroleum operations, instruction No.1 (2014) Ministry of Natural Resources</p> <p>Technical Guideline on The Environmental Impact Assessment of petroleum operations in the Kurdistan Region of Iraq (2014) Ministry of Natural Resources</p>	
Course topics (Theory)	Week	Learning Outcome
Introduction to HSE	1	What is HSE What are the HSE's main components Obligations
HSE Responsibilities	2	Management responsibilities Person in Charge Responsibilities Everyone's Responsibilities
Illegal Drugs and alcohol	3	Illegal drugs and alcohol Prescription drugs Obligation
Incident Investigation	4	Introduction counting near misses investigation procedures and policies
HSE Management System	5	Almost all oil and gas companies intends to achieve a leadership position by implementing efficient and fully

		<p>effective HSE practices.</p> <p>Increased Discipline, Clarity and Efficiency around Health, Safety & Environmental Compliance and Performance</p> <p>Integration of HSE into the way we do business.</p>
Fire Fighting and fire extinguishers	6	<p>Fundamentals of extinguishing</p> <p>Types of extinguishers</p> <p>Fire prevention and control</p>
Safe crane operation and rigging & slinging safe techniques	7	<p>Types of cranes</p> <p>Safe use of cranes and other off-road machineries</p> <p>Controlled use of off-road vehicles and check list.</p>
Safe scaffolding procedures	8	<p>Definition to scaffolding</p> <p>Types of scaffolds</p> <p>Safety procedures of using scaffolds</p>
Basic First Aid	9	<p>Cuts and wounds</p> <p>Animal bites</p> <p>Basic life support and initial response</p>
H ₂ S safety (sour gas and NORM)	10	<p>H₂S release response</p> <p>H₂S first aids</p> <p>NORM release</p> <p>HSE procedures</p>

Personal Protective equipment (PPE)	11	What are PPEs Why they are useful legal obligations
Confined space entry procedure	12	permit to work in confined space confined space safety issues tank batteries as an example
Driving safety procedure	13	permit to operate according to HSE procedures vehicle check list drive safely
EIA instruction and guideline by MNR	14, 15	EIA instruction EIA guideline What are the advantage and disadvantage points
Practical Topics	Week	Learning Outcome
Questions Example Design 1. Compositional: what are the reasons of preventing working under the influence of drug and alcohol in O&G industry? Ideal answer: because working under the influence of drug and alcohol can cause serious injuries to the consumer and co-workers.		

2. True or false type of exams:

prescribed drugs are not allowed within O&G industry

ideal answer: wrong, they are allowed, but the consumer's duty may change based on the supervisor's decision.

3. Multiple choices:

Blue labelled fire extinguisher contains 1. Powder 2. CO₂ 3. Water 4. Foam

Ideal Answer: 1. Powder

Q1/ choose the right answer (each point holds 2 mark)

1. Related to respirators, factors to be assessed is NOT including
 - a. Appropriate respirator selection for the hazards to which the employee is exposed.
 - b. Proper respirator uses under the workplace conditions the employee encounters.
 - c. Proper respirator maintenance.
 - d. **Using any type of respirators in workplace**

2. Site preparation is NOT including
 - a. **Excavation**
 - b. Levelling
 - c. Surveying
 - d. Trenching

Extra notes:

It is NOT intended that this course book be used as an all-inclusive source of safe practices. Our objective is to provide a safe and compliant work environment that is conducive to both personal and professional growth.

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.

Hussain Suad Hussain
Lecturer