



MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information			
Module Title	Occupational Safety		Module Delivery
Module Type	Support		<input type="checkbox"/> Theory <input type="checkbox"/> Lecture <input checked="" type="checkbox"/> Laboratory <input type="checkbox"/> Tutorial <input type="checkbox"/> Practical <input type="checkbox"/> Seminar
Module Code	PM 206		
ECTS Credits	2		
SWL (hr/sem)	100		
Module Level	2	Semester of Deliver	
Administering Department	PM and AM	College	TEMO
Module Leader	Haitham M. Wadullah	e-mail	Dr.haitham@ntu.edu.iq
Module Leader's Acad. Title	Prof.	Module Leader's Qualification	PhD
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	1/6/2023	Version Number	1.0

Relation with other Modules			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

<p>Module Objectives</p>	<ol style="list-style-type: none"> 1. Understand the importance of occupational safety: The module aims to provide students with a comprehensive understanding of the significance of occupational safety in the workplace. Students will learn about the potential hazards and risks associated with different industries and the impact they can have on the well-being of employees. 2. Identify common workplace hazards: Students will learn how to identify and assess various workplace hazards, including physical, chemical, biological, and ergonomic hazards. They will gain knowledge about different types of safety hazards that exist in different work environments and how to recognize them to prevent accidents and injuries. 3. Implement safety protocols and practices: The module will equip students with the knowledge and skills to implement effective safety protocols and practices in the workplace. They will learn about safety regulations, standards, and best practices, and understand the importance of following safety guidelines to create a safe working environment. 4. Develop risk assessment and management skills: Students will be trained in conducting risk assessments and developing risk management strategies. They will learn how to identify potential risks, evaluate their severity and likelihood, and develop appropriate control measures to mitigate or eliminate those risks.
<p>Module Learning Outcomes</p>	<ol style="list-style-type: none"> 1. Identify and assess workplace hazards: Engineering students will be able to identify and assess potential workplace hazards specific to their field of engineering. They will understand the importance of hazard identification and risk assessment in order to prevent accidents, injuries, and occupational illnesses. 2. Apply engineering principles to develop safety solutions: Students will be able to apply their engineering knowledge and skills to develop innovative and effective safety solutions. They will understand how engineering principles can be utilized to design and implement engineering controls, safety devices, and protective measures to minimize or eliminate workplace hazards. 3. Implement safety standards and regulations: Engineering students will be knowledgeable about relevant safety standards and regulations applicable to their specific engineering discipline. They will understand the importance of compliance with safety standards and be able to apply them in the design, construction, operation, and maintenance of engineering systems and processes. They will also be aware of the legal

	and ethical responsibilities associated with ensuring occupational safety in their professional practice.
5. Indicative Contents	<p>Indicative content includes the following.</p> <p><u>Part A - Theory</u></p> <p>1. Introduction to Occupational Safety, Identifying and Assessing Risks, Engineering Controls and Safety Systems, Personal Protective Equipment and Safety, Equipment Occupational Health and Industrial Health [10 hrs]</p> <p>Fire Safety and Emergency Preparedness, Electrical Safety in Engineering Machine and Equipment, Safety Construction, Safety in Engineering Projects, Hazardous Materials Management [10 hrs]</p> <p>Revision problem classes [2 hrs]</p> <p><u>Part B – Practice</u></p> <p>Training and Communication in Engineering Safety Incident Investigation and Reporting in Engineering Safety Management Systems in Engineering Application in Occupational Safety 1 Application in Occupational Safety 2. [10 hrs]</p>

6. Learning and Teaching Strategies	
7. Strategies	<ol style="list-style-type: none"> 1. Familiarize yourself with the subject: Start by understanding the key concepts, principles, and regulations related to Occupational Safety in the engineering field. This will provide a foundation for further exploration and learning. 2. Actively engage in practical applications: Apply the theoretical knowledge to real-world scenarios by analyzing case studies, conducting risk assessments, and identifying safety measures in engineering projects. This hands-on approach will help reinforce understanding and develop problem-solving skills. 3. Collaborate and discuss: Engage in discussions and group activities with fellow engineering students. Share experiences, exchange ideas, and learn from each other's perspectives. This collaborative learning environment can broaden your understanding and provide different insights into safety practices. 4. Stay updated with industry standards: Keep yourself informed about the latest safety regulations, codes, and standards relevant to the engineering field. Regularly refer to authoritative sources such as government agencies, professional organizations, and reputable publications to stay up-to-date with best practices.

Student Workload (SWL)			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعياً	(32/15)= 2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	68	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعياً	(18/15)= 1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	10% (10)	5 and 10	LO #2
	Assignments	1	10% (10)	2 and 12	LO #3
	Projects / Lab.				
	Report	2	20% (20)	8 and 13	LO #1 and LO #2
Summative assessment	Midterm Exam	1hr.	10% (10)	7	LO #1 - #2
	Final Exam	2hr.	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	مقدمة في السلامة المهنية
Week 2	تحديد المخاطر وتقييم المخاطر
Week 3	وسائل السيطرة الهندسية وأنظمة السلامة
Week 4	معدات الحماية الشخصية ومعدات السلامة
Week 5	الصحة المهنية والصحة الصناعية
Week 6	سلامة الحرائق والاستعداد للطوارئ
Week 7	سلامة الكهرباء في الهندسة
Week 8	سلامة الآلات والمعدات
Week 9	سلامة البناء في مشاريع الهندسة
Week 10	إدارة المواد الخطرة
Week 11	التدريب والتواصل في سلامة الهندسة
Week 12	تحقيق الحوادث وتقاريرها في الهندسة
Week 13	أنظمة إدارة السلامة في الهندسة
Week 14	تطبيق في السلامة المهنية 1
Week 15	تطبيق في السلامة المهنية 2
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	<ol style="list-style-type: none"> 1. "السلامة والصحة المهنية" بواسطة علي عبد العزيز المرزوقي. 2. "السلامة والصحة المهنية في البناء والتشييد" بواسطة فوزي عطا الله. 3. "السلامة والصحة المهنية والبيئية" بواسطة مجدي الغول. 4. "السلامة المهنية وإدارة المخاطر" بواسطة سلطان القحطاني. 5. "السلامة المهنية والوقاية من المخاطر" بواسطة نزار السعودي. 6. "السلامة المهنية والحريق" بواسطة حسن السناني. 7. "السلامة والصحة المهنية في المعامل" بواسطة عمرو حسين. 	Yes
Recommended Texts	<ol style="list-style-type: none"> 1. "Occupational Safety and Health for Technologists, Engineers, and Managers" بواسطة David L. Goetsch و Eugene R. Pierce. 2. "Introduction to Occupational Health in Public Health Practice" بواسطة Bernard D. Goldstein و Mary Sue Henifin. 3. "Safety and Health for Engineers" بواسطة Roger L. Brauer. 4. "Occupational Safety and Health for Technologists, Engineers, and Managers" بواسطة David L. Goetsch و Eugene R. Pierce. 	No
5. Websites	<ol style="list-style-type: none"> 1. No Occupational Safety and Health Administration (OSHA): The official website of OSHA, a government agency responsible for enforcing workplace safety regulations in the United States. It offers a wealth of resources, guidelines, and educational materials on various safety topics. 2. National Institute for Occupational Safety and Health (NIOSH): NIOSH is a U.S. federal agency focused on conducting research and providing guidance on occupational safety and health. Their website offers publications, databases, training materials, and tools related to workplace safety. 3. Health and Safety Executive (HSE): HSE is the national independent regulator for workplace health and safety in the United Kingdom. Their website provides guidance, publications, and tools to help businesses and individuals understand and comply with health and safety regulations. 4. Centers for Disease Control and Prevention (CDC): While primarily focused on public health, the CDC also offers resources and information on occupational safety and health. Their website provides research, guidelines, and educational materials on various workplace safety topics. 5. Canadian Centre for Occupational Health and Safety (CCOHS): CCOHS is a Canadian organization dedicated to promoting occupational health and safety. 	



	<p>Their website offers a wide range of resources, including fact sheets, guidelines, courses, and databases related to workplace safety.</p> <p>6. European Agency for Safety and Health at Work (EU-OSHA): EU-OSHA is an agency of the European Union focused on promoting safety and health in the workplace. Their website provides information, publications, and tools to help improve workplace safety across Europe</p>
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Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Module 1

Code	Course/Module Title	ECTS	Semester
PM 206	Occupational Safety	4	4
Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
0	2	32	68

Description

السلامة المهنية هي مجال دراسة يركز على تحقيق بيئة عمل آمنة وصحية للعاملين في جميع الصناعات والقطاعات. يهدف العلماء والباحثون في هذا المجال إلى تحليل وتقييم المخاطر المحتملة في مكان العمل وتطوير وتنفيذ استراتيجيات وأنظمة للوقاية والتحكم في هذه المخاطر. تشمل مجالات الدراسة في السلامة المهنية تحديد المخاطر، وتقييم المخاطر، وتصميم وتنفيذ إجراءات السلامة والوقاية، والتدريب والتثقيف، وإدارة الحوادث والطوارئ، والتشريعات والمعايير الخاصة بالسلامة. يهدف العلماء والمهنيون في هذا المجال إلى تعزيز ثقافة السلامة ورفع الوعي بأهمية السلامة المهنية بين العاملين وصناعة الأعمال بشكل عام. تعد السلامة المهنية جزءاً أساسياً من الإدارة الفعالة للمخاطر وتساهم في تحسين الأداء العام والجودة ورفاهية العاملين في بيئة العمل.