Module (Course Syllabus) Catalogue

2022-2023

College/ Institute	Erbil Technology Collage	
Department	Mechanic and metallurgy	
Module Name	Engineering Mechanics	
Module Code	ENM203	
Degree	Technical Diploma [*] Bachelor [ ] High Diploma [ ] Master [ ] PhD [ ]	
Semester	2ST	
Qualification	Master degree	
Scientific Title	Lecture	
ECTS (Credits)	7	
Module type	Prerequisite [ ] Core [*] Assist. [ ]	
Weekly hours	4	
Weekly hours (Theory)	(2)hrs Class	( )Total hrs Workload
Weekly hours (Practical)	(2)hr Class	( )Total hrs Workload
Number of Weeks	14	
Lecturer (Theory)	Salim Azeez Kako	
E-Mail & Mobile NO.	salim.kako@epu.edu.iq 07504491085 07802763313	
Lecturer (Practical)	Sdek Alyas Hamad	
E-Mail & Mobile NO.	07504476746	
Websites		

Course Book

Course Description	The design of this module includes establishing improving the student's knowledge and understanding about the engineering mechanics to provide the student realistic applications encountered in professional practice. The topics of this module includes : basic concepts of engineering mechanics, forces systems and an force analysing, Drawing of free body diagrams and determine the resultant of forces and/or moments. Draw complete and correct free-body diagrams and write the appropriate equilibrium equations from the free-body diagram. Determine the support reactions on a structure. Determine the connection forces in trusses and in general frame structures. Determine the centroid. Analyse statically determinate planar frames. The module will be delivered via lectures and tutorials (supported by problem-solving classes
Course objectives	The general objectives of this module are: - Understand the theory of engineering mechanics to tackle real live engineering problems - Apply principles of statics to solve engineering problems. - Involve in team working and collaborate with colleagues.
Student's obligation	The student must attendance the hall 2 hour and 2 hour in shop,abidance the lecturer instruction. And also student should be ready to: • To pass this module the students should attend all lectures and complete all tests, exams and assignments • Daily quiz • Seasonal exams • Make weekly reports • Arranging group reports • Presence in scientific trips
Required Learning Materials	* Textbooks. * Relevant reading **materials**. * Videos. * Recordings.

| | | Materials
• Oral presentations lectures, Group discussions, Seminars, Problem-solving based learning, Project based learning | | | |

		Task	Weight (Marks%)	Due Week	Relevant Learning Outcome
Evaluation		Paper Review			
	Assignments	Homework	14		
		Class Activity	2		
		Report	24		
		Seminar			
		Essay			
		Project			
	Quiz		4		
	Lab.				
	Midterm Exam		16		
	Final Exam		40		
	Total				

Specific learning outcome:	1. Recognize basic concepts of engineering mechanics 2. Identify quantify all types of forces systems and analyze forces into components 3. Determine and apply concepts of moment of forces and couples 4. Develop and sketch free body diagrams for different structures and elements of structures 5. Determine resultants and apply conditions of static equilibrium to plane force systems 6. Analyze frames and trusses using equilibrium equations. 7. Apply concepts of first moment of area and locate centroid of different types areas 8. Collaborate with others to solve problems by group or team working.
Course References:	Lecture notes - R. C. Hibbler, Engineering Mechanics: Principles of Statics and Dynamics, Pearson Press, 2006. - Hibbler, R.C and Ashok Gupta, "Engineering Mechanics: Statics and Dynamics", 11th Edition, Pearson Education (2010). - Kumar, K.L., "Engineering Mechanics", 3rd Revised Edition, Tata McGraw-Hill Publishing company, New Delhi (2008)

Course topics (Theory)	Week	Learning Outcome
Introduction	1	
Forces Systems	2	
Moment of forces	3	
Couples	4	
Equilibrium of rigid bodies- Conditions and Free body diagram (F.B.D)	5	
Equations of Equilibrium- Two forces members	6	
Midterm Examination	7	
Midterm Examination	8	
Equations of Equilibrium- Three forces members	9	
Equations of Equilibrium- Three forces members	10	
Distributed loads	11	
Trusses- Joints method	12	
Trusses- Sections Method	13	
Centroid	14	

Extra notes:

External Evaluator
The course catalogue carried out is directly involved the subjects ,materials and scientific information about material inspection so I wrote this recommendation .

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Erbil Engineering collage