



MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO




Department of Civil Engineering

LESSON PLAN

COURSE TITLE: Mechanics of Solids-I		COURSE CODE: CE212	CREDIT HOURS: 02	MINIMUM CONTACT HOURS: 32
COURSE INSTRUCTOR: Engr. Ali Raza Lashari (A+B) / Dr. Fahad Rehman Abro (C+D)				
Batch: 23CE	Semester: 3rd	Semester Starting Date: 15-07-2024	Semester Suspension Date: 06-11-2024	
COURSE LEARNING OUTCOMES:				
CLO No.	Description	Taxonomy level	Associated PLO	
1	SOLVE problems related to simple stress and strain in materials subjected to axial forces.	C3	1	
2	ANALYZE simple beams subjected to simple bending loads and explain torsion and energy theory.	C4	2	
LESSON CONTENTS AND ASSOCIATED CLO(s)				
Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
<ul style="list-style-type: none"> • SIMPLE STRESS AND STRAIN: - Stress, strain and Hooks Law - Deformation of a body due to self-weight and force acting on it - Principle of superposition - Deformation in the bars of different sections - Stresses in determinate and indeterminate structures - Thermal stress in simple and composite bars - Elastic Constants and their relations <p>No. of lectures Required : 13</p>	1	20	<ul style="list-style-type: none"> • Class Lecture • Discussion 	<ul style="list-style-type: none"> • Class Test -I (03) • Assignment -I(02) • Mid semester Exam (15)
<ul style="list-style-type: none"> • STRESSES IN BEAMS: - Centre of gravity / Centroid of plane figures (Symmetrical and Unsymmetrical sections) - Second moment of area/Moment of inertia of different composite sections; Product of Inertia - Principal stresses and Principal Moment of Inertia - Theory of simple bending - Bending stress and determination of flexural formula • STRAIN ENERGY: - Strain energy stored in a body due to gradual, sudden and impact loads - Theory of torsion of solids and hollow circular shafts <p>No. of lectures Required : 19</p>	2	30	<ul style="list-style-type: none"> • Class Lecture • Discussion 	<ul style="list-style-type: none"> • Class Test -II (02) • Assignment-II(03) • Final Exam (25)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities	CLO(s) to be assessed	
1	Assignments and Class Tests	10	Test(s)	2	1,2
			Assignment(s)	2	1,2
2	Mid Semester Exam	15	1	1	
3	Final Semester Exam	25	1	2	

<p>Prepared by: Engr. Ali Raza Lashari</p> <p>Signature: </p> <p>Dated: 27-05-2024</p>	<p>Reviewed by: Curriculum Review Committee</p> <p>Signature: </p> <p>Dated: 30-05-2024</p>	<p>Approved by: Chairman, CED</p> <p>Signature: </p> <p>Dated: 30-05-2024</p>
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