





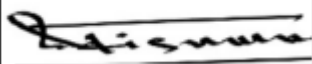
MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO
Department of Civil Engineering

LESSON PLAN

COURSE TITLE: Mechanics of Solids-II		COURSE CODE: CE251	CREDIT HOURS: 03	MINIMUM CONTACT HOURS: 48
COURSE INSTRUCTOR: Dr. Muhammad Rehan Hakro (A)/Engr. Ali Raza Lashari (B+C)				
Batch: 23CE	Semester: 4th	Semester Starting Date: 09-12-2024	Semester Suspension Date: 18-04-2024	
COURSE LEARNING OUTCOMES:				
CLO No.	Description	Taxonomy level	Associated PLO	
1	UNDERSTAND plane stress and strain in the members subjected to various loading conditions	C2	1	
2	ANALYZE the horizontal shear stress / force in thin-walled sections and circular sections within the elastic limits, and describe unsymmetrical bending, curved beams, theories of failure, creep, fatigue and inelastic materials	C4	2	
LESSON CONTENTS AND ASSOCIATED CLO(s)				
Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
<ul style="list-style-type: none"> • Stress and Strain during General Loadings <ul style="list-style-type: none"> ○ Analysis of plane stresses including principal stress (Analytically and graphically) ○ Principal stresses in beams ○ Analysis of plane strain (Analytically and graphically) ○ Strain rosette, ○ Stresses due to combined loading (bending and torsion) <p>No. of lectures Required : 24</p>	1	50	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Mid semester Exam (30) • Class Tests I (10) • Assignment-I (10)

<ul style="list-style-type: none"> • Horizontal Shear Stress / Force: <ul style="list-style-type: none"> ○ Horizontal shear stress in beams ○ Stress in built-up beams ○ Shear Flow and Shear center • General Topics: • Unsymmetrical bending • Analysis of curved beams • Theories of Failure • Creep and Fatigue fracture • Introduction to inelastic materials • Limit torque • Limit moment • Position of neutral axis • Residual stresses <p>No. of lectures Required : 24</p>	2	50	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Final Exam (40) • Class Tests II (05) • Assignment-II (05)
--	----------	-----------	--	--

S. No.	Assessment Activities	Marks	Activities		CLO(s) to be assessed
			Assignment(s)	Class Test(s)	
1	Class Test/Assignment	30	02	02	1 and 2
					1 and 2
2	Mid Semester Exam	30	1		1
3	Final Semester Exam	40	1		2

Prepared by: Dr. Muhammad Rehan  Signature: Dated: 18-12-2024	Reviewed by: Curriculum Review Committee  Signature: Dated: 20-12-2024	Approved by: Chairman, CED  Signature: Dated: 20-12-2024
---	--	--