



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: Engr. Manoj Kumar(A)/Engr. Rabinder Kumar(B+C+D)			
Batch: 21CE	Semester: 4th	Semester Starting Date: 03-07-2023	Semester Suspension Date: 20-10-2023

COURSE LEARNING OUTCOMES:

CLO No.	Description	Taxonomy level	Associated PLO
1	ANALYZE plane stress and strain in the members subjected to various loading conditions	C4	2
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


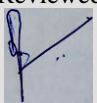

LESSON CONTENTS AND ASSOCIATED CLO(s)

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: 18</p>	1	30	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Mid semester Exam (20) • Class Test/Quiz/Assignment-I (05) • Class Test/Quiz/Assignment-II (05)

<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: <ul style="list-style-type: none"> ○ 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: 30</p>	2	70	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Final Exam (60) • Class Test/ /Quiz/Assignment-III (05) • Class Test/ /Quiz/Assignment-IV (05)
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ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities	CLO(s) to be assessed	
1	Class Test/Assignment/Project Design/Presentation/Quiz/Field Report	20	Class Test/ /Quiz/Assignment	4	1,2
2	Mid Semester Exam	20	1	1	
3	Final Semester Exam	60	1	2	

Prepared by:  Signature: Dated: 12-04-2023	Reviewed by: Curriculum Review Committee  Signature: Dated: 18-04-2023	Approved by: Chairman, CED  Signature: Dated: 18-04-2023
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