MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO

Department of Civil Engineering

LESSON PLAN

COURSE TITLE: **Structural Principles**	COURSE CODE: **CET208**	CREDIT HOURS: **02**	MINIMUM CONTACT HOURS: **32**
COURSE INSTRUCTER: **Eng. Muhammad Shaheer**			
Batch: **23BS CET**	Semester: **4th**	Semester Starting Date: 09-12-2024	Semester Suspension Date: 18-04-2025

COURSE LEARNING OUTCOMES:

CLO No.	Description	Taxonomy level	Associated PLO
1	**Analyze** beams, frames and trusses	C2	2
2	**Compute** deflections and slopes in determinate and indeterminate structures	C3	2

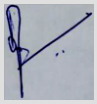
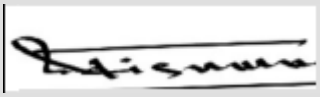
LESSON CONTENTS AND ASSOCIATED CLO(s)

Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
• **Introduction to structure analysis** • Types of Structures, structural idealization, loads • Free body concept • Condition of supports and attachments to other bodies • Support Reaction under different types of loading • Introduction to shear force and bending moment diagram • Determinacy and Stability of structures • Analysis of beams, frames and trusses • Coplanar trusses • Method of joints • Method of sections and graphical methods for analysis **No. of lectures Required : 14**	**1**	**23**	• Class Lecture • Discussion • Design practice	• Assignment (08) • Mid semester Exam (15)

• **Analysis of Statically rigid jointed plane frames:** • Determinacy and stability of plane frames • Analysis (sign convention etc) • Shear & Bending moment diagrams of Frames • **Deflection in beams and frames:** • Deflection diagrams and Elastic curves • Various method to compute deflection in beams and frames by: 1. Double integration 2. Moment area 3. Conjugate beam 4. Unit method methods and theory of catigijliano. **No of lectures Required : 18**	**2**	**27**	• Class Lecture • Discussion • Design practice	• Class Test (07) • Final Exam (20)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities		CLO(s) to be assessed
1	Class Test/Assignment/Project Design/ Presentation/Quiz/Field Report	**15**	Assignment(s)	1	1
			Class test(s)	1	2
2	Mid Semester Exam	**15**	1		1
3	Final Semester Exam	**20**	1		2

Prepared by: Engr.Muhammad Shaheer  Signature : Dated: 14-12-2024	Reviewed by: **Curriculum Review Committee**  Signature: Dated: 20-12-2024	Approved by: **Chairman, CED**  Signature: Dated: 20-12-2024