



MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO

Department of Civil Engineering

LESSON PLAN

COURSE TITLE: Reinforced and Prestressed Concrete		COURSE CODE: CE337	CREDIT HOURS: 03	MINIMUM CONTACT HOURS: 48
COURSE INSTRUCTOR: Prof. Dr. Fareed Ahmed Memon (A+C) /Engr. Azizullah Jamali (B+D)				
Batch: 21CE	Semester: 6th	Semester Starting Date: 15-07-2024	Semester Suspension Date: 06-11-2024	

COURSE LEARNING OUTCOMES:

CLO No.	Description	Taxonomy level	Associated PLO
1	DISCUSS various reinforced and prestressed concrete members.	C2	1
2	ANALYZE and design various reinforced and prestressed concrete members.	C6	3

LESSON CONTENTS AND ASSOCIATED CLO(s)

Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
<ul style="list-style-type: none"> • DESIGN OF REINFORCED CONCRETE MEMBERS: - Doubly reinforced concrete beams - Analysis and design of simply supported doubly reinforced concrete beams - Shear in reinforced concrete beams - Design of shear reinforcement for simply supported beams - Column, types of columns, design considerations - Analysis and design of short columns - Footing, types of footing - Design of isolated square & rectangular footing - Design of combined & strap footing - Design of raft/mat footing - Two-way slabs, design considerations - Staircase, types of staircases, design of staircases <p>➤ No. of lectures required: 29</p>	1	60	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Mid semester Exam (20) • Assignment-1 (05) • Class test-1 (05) • Final Exam (30)
<ul style="list-style-type: none"> • DESIGN OF PRESTRESSED CONCRETE MEMBERS: - Prestressed concrete, Basic concept of prestressed concrete - Advantages and applications of prestressed concrete - Classification and methods of prestressing - Properties and importance of high strength materials used in prestressed concrete - Analysis of prestressed concrete members, Basic assumptions - Analysis of prestressed concrete members based on stress and load balancing concept - Losses of Prestress - Lump sum & detailed estimation of prestress losses - Design of prestressed concrete members for flexure and shear <p>➤ No. of lectures required: 19</p>	2	40	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Assignment-2 (05) • Class test-2 (05) • Final Exam (30)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities		CLO(s) to be assessed
1	Class Test/Assignment/Project Design/Presentation/Quiz/Field Report	10	Assignment(s)	2	1,2
			Class test(s)	2	1,2
2	Mid Semester Exam	20	1		1
3	Final Semester Exam	60	1		1, 2

Prepared by: **Prof. Dr. Fareed A. Memon**

Signature :

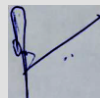
Dated: 22.05.2024



Reviewed by: **Curriculum Review Committee**

Signature:

Dated: 30-05-2024



Approved by: **Chairman, CED**

Signature:

Dated: 30-05-2024

