



MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY JAMSHORO
Department of Civil Engineering

LESSON PLAN

COURSE TITLE: Plain and Reinforced Concrete		COURSE CODE: CE345	CREDIT HOURS: 03	MINIMUM CONTACT HOURS: 48
COURSE INSTRUCTOR: Prof. Dr. Naeem Aziz (A+B) / Engr. Samar Rizwi (C)/ Engr. Masroor Ali Jatoi (D)				
Batch: 21CE	Semester: 5 th	Semester Starting Date: 20-11-2023	Semester Suspension Date: 29-03-2024	

COURSE LEARNING OUTCOMES:

CLO No.	Description	Taxonomy level	Associated PLO
1	DESCRIBE various properties of concrete and its ingredients	C2	1
2	DESIGN various structural elements of reinforced concrete	C6	3

LESSON CONTENTS AND ASSOCIATED CLO(s)

Contents	CLO No.	Marks Assigned	Delivery Methods	Assessment Methods (Marks)
<p>• PLAIN CONCRETE:</p> <ul style="list-style-type: none"> - Introduction to Concrete and its types. - Cement its types, manufactures and properties. - Fine and coarse Aggregates, properties of aggregates & their quality tests. - Admixtures, various types of admixtures - Design of concrete mixes. - Concrete batching, mixing, transportation, placing, compaction and curing of concrete - Properties of concrete in fresh state - Properties of concrete in hardened state - Durability of concrete structures - Cracks and repair of concrete structures <p>➤ No. of Lectures Required: 22</p>	1	42	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Assignment-I (05) • Class Test-I (05) • Mid semester Exam (20) • Final Exam (12)
<p>• REINFORCED CONCRETE:</p> <ul style="list-style-type: none"> - Reinforced concrete, basic principles, design codes live & dead loads on reinforced concrete structures. - Factor of safety- Strength and Grades of Rebars. - Design methods-working stress and ultimate strength design methods of reinforced concrete members. - Flexure Analysis of reinforced concrete beams. - Balanced, under reinforced & over reinforced section - Design of reinforced concrete beams for flexure. - Slabs, types of slabs-Live and dead loads on slabs. - Analysis of One-way solid slabs. - Design of One-way slabs and reinforcement details. <p>➤ No. of Lectures Required: 26</p>	2	58	<ul style="list-style-type: none"> • Class Lecture • Discussion • Design practice 	<ul style="list-style-type: none"> • Assignment-II (05) • Class Test-II (05) • Final Exam (48)

ASSESSMENT DETAILS

S. No.	Assessment Activities	Marks	Activities		CLO(s) to be assessed
1	Class Test/Assignment/Project Design/ Presentation/Quiz/Field Report	20	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

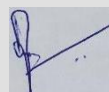
Prepared by: Prof. Dr. Naeem Aziz



Signature:

Dated: 13-11-2023

Reviewed by: **Curriculum Review Committee**



Signature:

Dated: 12-12-23

Approved by: **Chairman, CED**



Signature:

Dated: 12-12-23