Course Description Form

1. Course Name:
Design of Reinforced Concrete Structures I
2. Course Code:
WCV-41-06
3. Semester / Year:
First Semester / 2024-2025
4. Description Preparation Date:
23/09/2024
5. Available Attendance Forms:
Attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
Theoretical 45 hrs. Credits: 4
7. Course administrator's name (mention all, if more than one name)
Name: Waleed khaleel nayel--- PhD Email: waleed.k@uokerbala.edu.iq
8. Course Objectives

Course Objectives	1. Introducing students to the types of roofs used in different buildings. 2. Introducing students to calculating the minimum slab thickness of a concrete slab. 3. Direct Design Method. 4. Equivalent Frame Method. 5. Learn about the design and analysis of pre-stressed concrete members. 6. Using the theory of yield lines to analyze and design concrete slab.

9. Teaching and Learning Strategies

Strategy	Explaining the topics, and linking it to the practical reality of engineering projects, directing continuous questions to students for the purpose of continuing their participation, using electronic means to clarify various topics, conducting surprise and monthly written tests, and giving homework for each topic that is explained.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	3	Introduction	Introducing students to the different types of roofs and when to use each type Introduction	Attendance	Discussion
6-2	9	Minimum slab thickness to control deflection by using ACI-code	Minimum slab thickness to control deflection	Attendance	Exam
10-7	7	Direct Design Method	Direct Design Method	Attendance	Exam
11	9	Equivalent Frame Method	Equivalent Frame Method	Attendance	Exam
12	8	Yield Line Method	Yield Line Method	Attendance	Exam
15-13	9	Pre-stress concrete beam	Simple basic principles of pre-stressed concrete beam design	Attendance	Exam

11. Course Evaluation

Quizzes: 5%	Homework: 2.5 %	Class activity: 2.5%	1st Exam: 15%	2nd Exam: 15%	Final-Exam: 60%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	• Design of Reinforced Concrete Structures I and Design of Reinforced Concrete Structures II
Recommended books and references (scientific journals, reports…)	Building Code Requirements -ACI- for Structural Concrete (318-14,19)