

## University of Salahaddin – College of engineering – Civil engineering Department

Module Name	Design of Reinforced Concrete structure		Course Status	Core
Frequency	Yearly in fall semester	Code	1135	Credit point 5
Duration:	15 week – 1 semester		Module Language	English
Pre-requisites	Reinforced Concrete		Required Level	
Course Description	Design of reinforced concrete structures will include the following subjects: 1. Introduction, general introduction about analysis and design of structures. 2. Two-way slabs, Introduction, types, ...etc. Two-way slabs will be design with the following methods: - Direct design method - Equivalent frame method - Yield line theory of slabs. 3. Shear walls 4. multi-story buildings, applied loads, Methods, Software application.			
Course Objectives	This module is intended to give students a good understanding of the design and behavior of reinforced concrete building members at the ultimate limit state. Design of framed building structures in detail with particular emphasis on the design of two-way slabs by different methods and shear walls will be learned.			
Learning Outcome	Emphasis is placed on understanding structural behavior and the background to the analysis and design methods of two-way slabs and shear walls according to ACI code. By the end of this module students will have a good understanding of the design and behavior of reinforced concrete buildings (slabs, beams, walls and columns).			
Literature & text Books	1. Building code requirements for structural concrete-ACI 318M-19 and Commentary', by American Concrete Institute ACI 318, 2019. 2. Structural Concrete Theory and Design by M. Nadim Hassoun and Akthem Al-Manaseer, 7th edition, 2020, Wiley.			
Type of Teaching	Theory Lectures 3 hr	Tutorial 1 hr	Practical 0 hr	
Evaluation Profile	Students are required to first midterm exam on 8 week, class room activities, quizzes, home works and final exam on week 15th. So that the final grade will be based upon the following criteria:			
	Midterm Exam (90 min written exam at week 8)			20 %
	Class Room Activities, quizzes, assignments (during the course period)			20 %
	Final Course Exam	Written exam (120 min written exam week 15)		60 %
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Work load:	Total Work Load 135 hr	Class Attendance 60 hr	Self Studies 75 hr	