

COURSE DESCRIPTION FORM	
Course Code and Title	CE429 SPECIAL TOPICS (STRUCTURE)
Semester	7
Catalog description	Loads, Design Steps, Floors, Structural System Regulation Principles, Columns, Beams, Retaining Walls, Plates, High Rise Buildings.
Required reading	Aka, I. ve Altan, M. “BETONARME TAŞIYICI SİSTEMLER”, İstanbul Teknik Üniversitesi İnşaat Fakültesi Matbaası, İstanbul 1992, 134 Pages.
Recommended reading	Aka, İ., Keskinel, F. ve Arda, T.S. “BETONARME YAPI ELEMANLARI”, Birsen Yayınevi, İstanbul 1973
ECTS	4
Prerequisites and co-requisites	No prerequisite. Required attendance to lectures is at least 70% of total term hours.
Compulsory/Elective	Technical elective course
Language of instruction	English
Aim of course	To provide information and awareness to students about loads, design phases, load bearing system regulation principles and high rise buildings.
Learning outcomes of the course unit	It has been observed that buildings that do not have a proper bearing system are damaged during earthquakes. The aim of the course is to be able to choose properly reinforced concrete systems.
Mode of delivery	The mode of delivery of this course is face to face.
Course content	<ol style="list-style-type: none"> 1) Introduction, history and examples from nature 2) Loads 3) Design Steps: Preliminary project, final project, application project, design program 4) Floors: Beamed floors, toothed floors, ribbed and asphalt floors, beamless floors, cassette floors 5) Bearing System Regulation Principles: Establishment of general bearing systems 6) 1. Mşdterm 7) Bearing System Regulation Principles: Columns, retaining walls 8) Bearing System Regulation Principles: Beams, plates 9) Bearing System Regulation Principles: Concrete retaining walls, examples without application 10) High Rise Buildings: Introduction, history, overview of types of bearing systems, high strength concrete, factors to be considered in selecting a bearing system 11) High Rise Buildings: Transfer of horizontal loads, selection of proper stiffness elements, retaining walls, retaining walls with openings, tubes. 12) High Rise Buildings: Tubes formed in frame type systems, tubes formed in frame type systems with retaining walls. 13) 2. Midterm + Frames 14) Shells, folded plates 15) Homework presentations
Planned learning activities and teaching methods	3 lecture hours per week (3+0) Internet browsing, library work Presentation Homework Midterm exam and required works Final exam and required works

Assessment methods and criteria		Quantity	Percentage (%)						
	Mid-terms	2	50						
	Assignment	2	10						
	Exercises	-	-						
	Projects	-	-						
	Practice	-	-						
	Quiz	-	-						
	Contribution of In-term Studies to Overall Grade %		60						
	Contribution of Final Examination to Overall Grade (%)		40						
	Attendance								
Workload	Work activity		Total Week Count	Weekly Duration (in hour)	Total Workload in Semester				
	Theoretical Study Hours of Course Per Week		14	3	42				
	Practicing Hours of Course Per Week		13	0	0				
	Reading		14	0	0				
	Searching in Internet and Library		14	1	14				
	Designing and Applying Materials		14	0	0				
	Preparing Reports		14	0	0				
	Preparing Presentation		14	1	14				
	Presentation		14	0	0				
	Mid-Term and Studying for Mid-Term		2	10	20				
	Final and Studying for Final		1	10	10				
	Other		0	0	0				
	Total Workload:				100				
	Total Workload / 25:				4				
	ECTS:				4				
Course's contribution to program	No	Program Learning Outcomes			1	2	3	4	5
	1	Adequate knowledge in mathematics, science and engineering subjects pertaining to the relevant discipline; ability to use theoretical and applied knowledge in these areas in complex engineering problems.					X		
	2	Ability to identify, formulate, and solve complex civil engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.				X			
	3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.						X	
	4	Ability to devise, select, and use modern techniques and tools needed for analyzing and solving complex problems encountered in civil engineering practice; ability to employ information technologies and to use at least one computer programming language effectively.			X				
	5	Ability to design and conduct			X				

[illegible]