

COURSE DESCRIPTION FORM			
<b>Course Code and Title</b>	CE388 REINFORCED CONCRETE I		
<b>Semester</b>	6		
<b>Catalog description</b>	Introduction, Material Behavior, Fundamentals, Structural Safety, Axially Loaded Members, Bending Members,		
<b>Required reading</b>	Reinforced Concrete/Fundamentals / Uğur Ersoy-Güney Özcebe.		
<b>Recommended reading</b>	McGregor “Reinforced Concrete Structures” Prentice Hall, 1997. W.H.Mosley, J.H.Bungey “Reinforced Concrete Design” McMillan Ed.Hd. 1991.		
<b>ECTS</b>	5		
<b>Prerequisites and co-requisites</b>	Prerequisite of this course is: <b>CE226 STRENGTH OF MATERIALS I</b> Required attendance to lectures is at least 70%		
<b>Compulsory/Elective</b>	Compulsory		
<b>Language of instruction</b>	English		
<b>Aim of course</b>	To give the basic principles of reinforced concrete.		
<b>Learning outcomes of the course unit</b>	<ol style="list-style-type: none"> <li>1. To learn the fundamentals of reinforced concrete</li> <li>2. To understand the behavior of reinforced concrete members</li> <li>3. To learn the codes</li> <li>4. To be able to calculate the reinforced concrete sections</li> <li>5. To be able to draw interaction diagram for columns</li> </ol>		
<b>Mode of delivery</b>	The mode of delivery of this course is face to face.		
<b>Course content</b>	<ol style="list-style-type: none"> <li>1. Introduction, Materials</li> <li>2. Structural Safety, Load And Material Coefficients. Live Load Arrangements</li> <li>3. Ultimate Strength Assumption</li> <li>4. Concentric Loaded Members</li> <li>5. Compatibility In Concrete</li> <li>6. Failure Types Of RC Members</li> <li>7. Ultimate Strength Design Of RC Beams</li> <li>8. Midterm</li> <li>9. Design Of RC Beams</li> <li>10. Ultimate Strength Design Of RC Columns</li> <li>11. Design Of RC Columns</li> <li>12. Multiaxial Bending In RC Columns</li> <li>13. Midterm / Shear Behavior of RC Members</li> <li>14. Shear Behavior of RC Members</li> <li>15. Design of RC Members for Shear</li> </ol>		
<b>Planned learning activities and teaching methods</b>	3 lecture hours per week (3+0) Preparing Reports Midterm exam and required works Final exam and required works		
<b>Assessment methods and criteria</b>		Quantity	Percentage (%)
	Mid-terms	2	60
	Assignment	-	-
	Exercises	-	
	Projects	-	
	Practice	-	
	Quiz		
	Contribution of In-term Studies to Overall Grade %		60

	Contribution of Final Examination to Overall Grade (%)		40					
	Attendance							
Workload	Efficiency	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	14	0	0				
	Reading	14	0	0				
	Searching in Internet and Library	14	1	14				
	Designing and Applying Materials	14	0	0				
	Preparing Reports	14	2	28				
	Preparing Presentation	14	0	0				
	Presentation	14	0	0				
	Mid-Term and Studying for Mid-Term	2	15	30				
	Final and Studying for Final	1	10	10				
	Other	0	0	0				
	Total Workload:			124				
	Total Workload / 25:			4.96				
	ECTS:			5				
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 experiments, gather data, analyze and interpret results for investigating complex civil engineering problems or discipline specific research questions.		X				
	6	Ability to work efficiently in intra-disciplinary and multi-disciplinary teams.		X				
	7	Ability to work individually.						X
	8	Ability to communicate effectively in Turkish, both orally and in writing; ability to		X				

[illegible]