

IM 481 REINFORCED CONCRETE II		CIVIL ENGINEERING	
Semester	Credit Structure		
	Lecture	Recitation	Laboratory
7	3	0	0
Language	English		
Compulsory / Elective	Compulsory		
Prerequisites	IM388		
Catalog Description	Shear and diagonal tension in R.C. beams. Analysis and design for torsion. Punching. Bond and anchorage on R.C. members. Design of one and two way slabs. Yield line analysis for slabs. Strip method for slabs. Footing and foundations. Retaining walls		
Course Objectives	To give the basic principles of designing the reinforced concrete structures.		
Course Outcomes	Gaining the skill of designing the reinforced concrete structures.		
Textbook and /or References	McGregor "Reinforced Concrete Structures" Prentice Hall, 1997. 2) W.H.Mosley, J.H.Bungey "Reinforced Concrete Design" McMillan Ed.Hd. 1991		
Assessment Criteria		Quantity	Percentage
	Midterm Exams	2	50
	Quizzes		
	Homeworks		
	Projects		
	Term Paper		
	Laboratory Work		
	Other		
	Final Exam	1	50
Course Category by Content (%)	Mathematics and Basic Sciences	40	
	Engineering Science	40	
	Engineering Design	20	
	Social Sciences		
Instructors	Prof.Dr.Sıddık Şener, Öğr. Gör. Dr. Sabahattin AYKAÇ		

COURSE PLAN

Week	Topics
1	Diagonal tension
2	Shear reinforcement
3	Punching
4	Torsion
5	Bonding
6	I. Exam
7	Reinforced concrete slabs
8	Two way spanning slabs
9	Ribbed floor slabs
10	Hillerborg strip method
11	Yield line analysis of slabs
12	Footings, isolated bases
13	II. Exam
14	Strip foundations

RELATIONSHIP BETWEEN THE COURSE AND DEPARTMENT CURRICULUM

	Program Outcomes	1	2	3
1	An ability to apply knowledge of mathematics, science, and engineering			X
2	An ability to design and conduct experiments, as well as to analyze and interpret data			X
3	An ability to design a system, component, or process to meet desired needs			X
4	An ability to function on multi-disciplinary teams		X	
5	An ability to identify, formulate, and solve engineering problems			X
6	An understanding of professional and ethical responsibility			X
7	An ability for effective written and oral communication in Turkish and English		X	
8	The broad education necessary to understand the impact of engineering solutions in a global and societal context		X	
9	A recognition of the need for, and ability to engage in life-long learning		X	
10	A knowledge of contemporary issues		X	
11	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice			X
Contribution of the course : 1:None 2:Partially 3:Completely				