

TOROS ÜNİVERSİTESİ

Faculty Of Fine Arts, Design And Architecture
Architecture

Course Information

REINFORCED CONCRETE STRUCTURES					
Code	Semester	Theoretical	Practice	National Credit	ECTS Credit
		Hour / Week			
ARC236	Spring	2	0	2	2

Prerequisites and co-requisites	
Language of instruction	Turkish
Type	Required
Level of Course	Bachelor's
Lecturer	Öğr. Gör . Servet Süha SARIAKÇALI
Mode of Delivery	Face to Face
Suggested Subject	
Professional practise (internship)	None
Objectives of the Course	Learning engineering design principles on Reinforced Concrete Structure Design in architecture. To provide the minimum conditions in the structure to be designed by learning the regulations and standards in operation on this subject. Mastering the knowledge, skills and techniques that will provide engineering precursors to secure, economical structures. Knowing the materials that make up reinforced concrete, getting information about the quality of concrete and its contents.
Contents of the Course	Types of reinforced concrete flooring, load transfer to beams, bearing conditions, deflection conditions Girder-free flooring design conditions, rules of precasting heading and non-heading zones Usage areas of cassette tiles, pre-size and account rules Beams, pre-size, section definition with table, beam regulation rules, reinforcement Regulation Conditions Use of axes, floor, beam, column brands in formwork plan Reinforced concrete Ultimate Design assumptions . Column and reinforced concrete walls definitions, rectangular, circular and multi-edged columns and R/C walls prefacing. Arrangement of reinforcement in Column and R/C walls elements, making elevations, definition of stirrups tightening zones Design of stairs and equipment layout Definition of basics; Shallow Foundations * Under-The-Wall Foundations * Singular (Simple) Foundations * Continuous Foundations * Continuous Foundations In One Direction * Continuous In Two Directions Foundations (Grid Foundations) * Radial General Foundations Deep Foundations * Piled Foundation * Caisson Basic * Pit Foundation Joints designations in buildings Joints and reasons for making joints Principles Of Earthquake Resistant Building Design Earthquake, earthquake experienced results Causes Of Damage To Buildings In Earthquakes Corrosion Problem In Reinforced Concrete Structures at risk of being damaged or destroyed in earthquakes Purpose Of Earthquake Resistant Building Design Architecture and earthquake resistant design Building Plan types and examination Irregularity In The Plan Torsion Damage Weak Column-Strong Beam Problem Soft Story behavior and related damages Discontinuity Of Vertical Elements Of The Bearing System Vertical discontinuities and short column mechanism Carrier System Regulation Principles Arrangement Of Curtains R/C walls and frame systems Proper pitch and core arrangement Arrangement Of Core R/C walls Curvature Surface Systems Benefits and objectionable aspects of shells Curvature Surface Systems Definition of domes and forces distributions Curvature Surface Systems and applications made in the world Hyperboloid shells and examples made in the world

Learning Outcomes of Course

#	Learning Outcomes
1	
2	
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Course Syllabus

#	Subjects	Teaching Methods and Technics
1		
2		
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14		
15		
16	Final Exam	

Course Syllabus

#	Material / Resources	Information About Resources	Reference / Recommended Resources
1			

Method of Assessment

#	Weight	Work Type	Work Title
1	40%	Mid-Term Exam	Mid-term Exam
2	60%	Final Exam	Final Exam

Relationship between Learning Outcomes of Course and Program Outcomes

#	Learning Outcomes	Program Outcomes	Method of Assessment
1			
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PS. The numbers, which are shown in the column Method of Assessment, presents the methods shown in the previous table, titled as Method

Work Load Details

#	Type of Work	Quantity	Time (Hour)	Work Load
1	Course Duration	14	2	28
2	Course Duration Except Class (Preliminary Study, Enhancement)	14	2	28
3	Presentation and Seminar Preparation	0	0	0
4	Web Research, Library and Archival Work	1	10	10
5	Document/Information Listing	0	0	0
6	Workshop	0	0	0
7	Preparation for Midterm Exam	1	6	6
8	Midterm Exam	1	1	1
9	Quiz	0	0	0
10	Homework	1	8	8
11	Midterm Project	0	0	0
12	Midterm Exercise	0	0	0
13	Final Project	0	0	0
14	Final Exercise	0	0	0
15	Preparation for Final Exam	1	8	8
16	Final Exam	1	1	1
				90