Marmara University, Faculty of Architecture and Design
Department of Architecture
2024-2025 Spring Semester

Course Title	Code	Semester	Hour (T+P)	Credit	ECTS
Material and Technology II	ARCH206	4 (Spring)	2 + 2	3	4
Pre-requisites	-				
Language of Instruction	English				
Course Type (Required / elective)	Required				
Course Coordinator	-				
Instructor /e-mail	Assist. Prof. Dr. H. Nur KIZILYAPRAK nur.kizilyaprak@marmara.edu.tr				
Assistans	Res. Assist. Rumeysa Temel				

Goals	● Introducing the basic material and technology terminology such as buildings, building elements, construction and construction methods within the systems approach. ● Introducing the classifications, design criteria and construction methods of building elements (floor systems, vertical circulation systems, wall systems, windows and doors, roof systems) used in reinforced concrete skeleton building systems. ● Introducing of components and materials of building elements (floor systems, vertical circulation systems, wall systems, windows and doors, roof systems) used in reinforced concrete skeleton building systems. ● Introducing the materials, workmanship, vehicle inputs and construction stages in the construction of building elements by observing the production of full-size models.
Learning Outcomes	1. Ability to understand and analyze buildings as a system. 2. Having conceptual information about functional building elements used in reinforced concrete building systems, such as floor systems, vertical circulation systems, wall systems, windows and doors, roof systems. 3. Ability to classify functional building elements used in reinforced concrete building systems, such as floor systems, vertical circulation systems, wall systems, windows and doors, roof systems. 4. Ability to draw typical area details of functional building elements used in reinforced concrete building systems, such as floor systems, vertical circulation systems, wall systems, windows and doors, roof systems.
Course Content	● the basic material and technology terminology ● the classifications, design criteria and construction methods of building elements (floor systems, vertical circulation systems, wall systems, windows and doors, roof systems) used in reinforced concrete skeleton building systems. ● components and materials of building elements (floor systems, vertical circulation systems, wall systems, windows and doors, roof systems) used in reinforced concrete skeleton building systems.

Assessment Criteria	**Assessment Components**	
	Mid-term	40 %
	Final Exam	60 %
	TOTAL	100 %

Midterm grade: -
Final grade: 50
Course success: 50

WEEKLY TOPICS AND PREPARATIONS		
Weeks	**Topics**	**Initial Studies**
Week 1 21.02.2025	Introduction, explanation of the syllabus, distribution of the plans for the studio works	
Week 2 28.02.2025	Lecture: **RC Floor systems** - RC floor classification - Basic components and materials for RC floors	Assignment: Draw of floor plans (structural system only), Scale:1/50
Week 3 07.03.2025	Short Lecture: **1/50 drawing techniques** Studio Work: **Drawing of RC floor system (1 plan, 2 sections)** - Waffle floor - Ribbed / Hallow Brick floor	Assignment: Structural system model of the given building, Scale: 1/50
Week 4 14.03.2025	Studio Work: **Drawing of detail of RC floor system** - Intermediate floor detail - Basement floor detail	Assignment: Floor systems of the given building, -Model -Drawings (Plan, Sections)
Week 5 21.03.2025	Lecture: **RC Stair systems** - General information about stairs - Calculation method - RC stair classification - Basic components and materials for RC stairs	Assignment: Calculation of stair system
Week 6 28.03.2025	Studio Work: **Draw of stair system in detail, Scale:1/50** - 3 plans (Basement floor, intermediate floor, top floor) - 2 sections	Assignment: Stair system model of the given building, Scale: 1/50
Week 7 04.04.2025	Studio Work: **Draw of stair system in detail, Scale:1/50** - 3 plans (Basement floor, intermediate floor, top floor) - 2 sections	
Week 8 11.04.2025	Lecture: **Wall systems & Openings** - External walls - Internal partitions	
Week 9 14-20.04.2025	**Midterm exam** **SUBMISSION OF FLOOR & STAIR SYSTEMS** - Model - Drawings (Plans, Sections)	
Week 10 25.04.2025	Lecture: **Wall systems & Openings** - Windows / Doors	
Week 11 02.05.2025	Studio Work: **Wall systems & Openings**	Assignment: Research on walls, windows / doors details from firms
Week 12 09.05.2025	Studio Work: **Wall systems & Openings**	Assignment: Wall and window / doors system model of the given building, Scale: 1/50
Week 13 16.05.2025	Lecture: **Roof systems** - General information about roofs - RC roof classification	
Week 14 23.05.2025	Lecture: **Roof systems** - Terrace roofs	
Week 15 30.05.2025	Studio Work: **Roof systems -** Planning of rainwater drainage & Detail of the terrace roof system	
Week 16 06.06.2025	**RAMADAN EID**	
Week 17 13.06.2025	Studio Work: **Roof systems** – Planning of rainwater drainage & Detail of the terrace roof system	
FİNAL 16-29.06.2025	**Final Exam** **SUBMISSION OF WALL, WINDOW & DOOR AND ROOF SYSTEMS** - Model - Drawings (Plans, Sections)	

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