

Marmara University Faculty of Architecture
School of Architecture and Design
2021-2022 Fall Semester

Course Title	Code	Semester	Hour (T+P)	Credit	ECTS
Material and Technology I	ARCH205	Fall	2+2	3	4
Prerequisites	-				
Language of Instruction	English				
Course Type (Required / elective)	Required				
Course Coordinator	-				
Instructor /e-mail	Lecturer Enise Yasemin Gökyiğit Arpacı yasemingokyigit@gmail.com				
Assistans	-				
Goals	Gaining familiarity with building elements and building materials. To understand the point that they have reached in today's technology in relation to their historical process. Doing exercises and research about elements such as foundation, wall, floor, roof, etc., and materials such as stone, brick, mud brick, glass, steel, reinforced concrete, etc.				
Learning Outcomes	The students who have succeeded in this course; 1. Understand and define the general structural systems of buildings 2. Gain the knowledge of structural components. 3. Learn the principles of structural components such as foundations, walls, floors and roofs. 4. Gain the skill of examining and decision making of components.				
Course Content	-Introduction to building structures and building technology -Conceptual approaches of standing on top of each other, covering and shelter, tension, etc. -Introduction to the building components (foundations, walls, slabs etc.) -Modelling and Technical drawing principles in 1/50 scale.				
Assessment Criteria	Assessment Components				
	Weekly Studies			%30	
	Mid-term			%30	
	Final Exam			%40	
	TOTAL			%100	
Midterm grade: 50					
Final grade: 50					
Course success: 50					

WEEKLY TOPICS AND PREPARATIONS		
Weeks	Topics	Initial Studies
Week 1	Introduction to Material and Technology + Definitions + Construction Systems & Examples	-
Week 2	Masonry Construction Techniques & Elements (Foundations + Walls)	Research on Topic
Week 3	Masonry Construction Techniques & Elements (Floors + Roofs) Masonry Construction Models 1/50	Research on Topic
Week 4	Masonry Construction Models 1/50 Masonry Construction Drawings 1/50	Research on Topic
Week 5	Masonry Construction Drawings 1/50	Research on Topic

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Week 6	Frame Structure (R.C) & Elements (Foundations + Walls)	Research on Topic
Week 7	Frame Structure (R.C) & Elements (Floors & Roofs) Frame Structure (R.C) Models 1/50	Research on Topic
Week 8	Frame Structure (R.C) Models 1/50 Frame Structure (R.C) Drawings 1/50	Research on Topic
Week 9	Frame Structure (R.C) Drawings 1/50	Research on Topic
Week 10	Frame Structure (Wooden) (Walls + Floors)	Research on Topic
Week 11	Frame Structure (Wooden) (Roofs) Frame Structure (Wooden) Models 1/50	Research on Topic
Week 12	Frame Structure (Wooden) Models 1/50 Frame Structure (Wooden) Drawings 1/50	Research on Topic
Week 13	Frame Structure (Wooden) Drawings 1/50	Research on Topic
Week 14	Contemporary Construction Techniques Models	Research on Topic
Week 15	Contemporary Construction Techniques Models	Research on Topic

REFERENCES

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Marmara University Faculty of Architecture
School of Architecture and Design
2021-2022 Fall Semester

ECTS / WORKING HOUR TABLE			
Activities	Number of Weeks	Duration (Hour)	Working Hours
Duration of the Course (Including Exams: 14 x Total Weekly Course Hour)	16	4	64
Extracurricular Working Hour (Preparatory Work, Review, Internet studies etc.)	15	2	30
Midterm exam	1	4	4
Homeworks and Presentations	7	4	28
Final Exam	1	4	4
Working Hours in Total			130
Working Hours in Total / 30			4,3
ECTS Credit of the Course			4