

School of Fine Arts Design and Architecture / Architecture

2023 - 2024 Academic Year

BUILDING TECHNOLOGY II

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
BUILDING TECHNOLOGY II	MIM2157630	Fall Semester	2+2	3	4
Prerequisites Courses	YAPIM TEKNOLOJİSİ I				
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Assist.Prof. Pelin KARAÇAR				
Name of Lecturer(s)	Lect. Necdet KETKEN, Lect. Semih AKŞEKER				
Assistant(s)					
Aim	This course is composed of theoretical and practical steps to gain knowledge and experience of students in order to benefit from the rough construction problems encountered in design and implementation studies in all stages of Architecture and Interior Architecture education and in the future. At the end of the course, students will be able to learn the general concepts of construction and construction, learn basic principles of reinforced concrete structures from skeletal systems, including wall and roof systems, and learn the principles of design and construction as a whole.				
Course Content	This course contains; Explanation of goal and scope of the courseExplanation of content and method of the courseSkeleton structure system(recap),Vertical circulation elementsRamps, Elevators, Freight-lift, Escalators, Concrete stairs, geometrical specifications, relation with structure(straight, quarter turn,spiral) Dimensional design of stairs,Stairs; load transfer principals, concrete stair solutions,Stairs; steel stair solutions,Stairs; timber stair solutions,Slabs in skeleton structure (large span slabs, composite slabs...) Recent regulations for the design of buildings in sismic areas.,MIDTERM EXAM,Introduction to roof systems,Roof systems; suspended roof,trusses,Long span roof systems (systems with laminated timber beam and steel),Walls in skeleton structureInterior wall systems,Walls in skeleton structureExterior wall systems,Walls in skeleton structure,Hybrid structure systemsSingle/Multi storey prefabricated structure systems.				
Course Learning Outcomes		Teaching Methods	Assessment Methods		
User-environment-building system interaction		2, 6, 9	A, E, F		
Construction and building methods		2, 6, 9	A, E, F		
Terminology of building and construction technology		2, 6, 9	A, E, F		
Skeletal building systems (reinforced concrete, steel, wood and light steel)		2, 6, 9	A, E, F		
Building sub systems		2, 6, 9	A, E, F		
Teaching Methods	2: Project Based Learning Model, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Explanation of goal and scope of the courseExplanation of content and method of the courseSkeleton structure system(recap)				
2	Vertical circulation elementsRamps, Elevators, Freight-lift, Escalators, Concrete stairs, geometrical specifications, relation with structure(straight, quarter turn,spiral) Dimensional design of stairs				
3	Stairs; load transfer principals, concrete stair solutions				
4	Stairs; steel stair solutions				
5	Stairs; timber stair solutions				
6	Slabs in skeleton structure (large span slabs, composite slabs...)Recent regulations for the design of buildings in sismic areas.				
7	MIDTERM EXAM				
8	Introduction to roof systems				
9	Roof systems; suspended roof,trusses				
10	Long span roof systems (systems with laminated timber beam and steel)				
11	Walls in skeleton structureInterior wall systems				
12	Walls in skeleton structureExterior wall systems				
13	Walls in skeleton structure				
14	Hybrid structure systemsSingle/Multi storey prefabricated structure systems				
Evaluation Methods		Weight(%)			
Midterm Exam		50			
General Exam		50			

Resources
To be distributed by the lecturerFundamentals of Building Construction: Materials and Methods, Edward Allen, 2008. Building Construction Illustrated, Francis Ching, 2008, Architectural Detailing: Function - Constructability - Aesthetics, Edward Allen, 2006 Architect's Handbook of Construction Detailing, David Kent Ballast, 2009 Yapım Malzemeler Yöntemler Çözümler İlkel, Çetin Türkçü, Ahşap Çatılar, Nihat Bayülgen Yapı elemanı tasarımında malzeme, Nihat Todemir