COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Building Structure	ARCH231	3	**Theory** 2	**Practice** 2	3	3
Course Type	Compulsory Courses	Department Elective	Faculty Elective	University Elective	CoHE (YÖK) Compulsory	Other
	x					
Level of Course	Associate Degree (Short Cycle)		Undergraduate (First Cycle)		Graduate/ Doctoral (Second /Third Cycle)	
			x			

Language of Instruction	English

Course Instructor(s)	Assoc. Prof. Dr. Soad Abokhamis Mousavi	E-mail: soad.mousavi@arucad.edu.tr Office : TI-OFF18
Course Objectives	This course aims to deepen students' understanding of building structural elements and their roles in overall structural integrity. It introduces the construction details of walls, flooring, roofs, and staircases, enabling students to analyze and design basic structural elements within interior architecture projects. Additionally, the course equips students with the skills necessary to evaluate the suitability of various structural elements in different architectural contexts, fostering critical thinking in the application of structural systems within interior spaces.	
Course Learning Outcomes	**Students will be able to:**	**Teaching Methods** / **Evaluation Methods**
	Apply knowledge of structural systems to solve practical design problems in interior architecture.	Direct instruction technique / Mid-Term Project Submission, Portfolio Submission
	Identify and **explain** the functions of various structural elements, including walls, floors, roofs, and staircases.	Case studies, Direct instruction technique, studio critiques / Mid-Term Project Submission, Portfolio Submission, Final Project Submission
	Analyze the structural requirements and constraints of different building elements in interior spaces.	Case studies, Direct instruction technique, group projects / Mid-Term Project Submission, Portfolio Submission

			Final Project Submission
	Design basic structural components considering material properties, load distribution, and spatial integration	Construction detail: direct instruction technique, peer discussions	Mid-Term Project Submission Portfolio Submission Final Project Submission
	Evaluate construction details and assess their impact on the durability, stability, and performance of structures.	Construction detail lectures, peer discussions, Direct instruction technique	Mid-Term Project Submission Portfolio Submission Final Project Submission
	Integrate structural stability and aesthetic quality to create buildings that enhance livability and cultural identity.	Case studies, Direct instruction technique, group projects	Mid-Term Project Submission Portfolio Submission Final Project Submission
	Design structures that are resilient to environmental stress, promoting safer and more sustainable communities.	Material research, sustainability-focused lectures	Portfolio Submission Final Project Submission
	Select and **design** structures and materials that minimize embodied carbon, **supporting** climate mitigation efforts.	Case studies, Direct instruction technique, group projects	Portfolio Submission Final Project Submission
Course Content	This course, the last of its series, provides a more advanced overview of various materials used in building construction and the materials' basic principles of structural, physical, and long-term performance. The main objectives of the course are to explore and discover the general construction methods and building details by active experimentation with structural models and installations, and to reveal the latent design potential in structural systems. The course will mainly focus on Foundation Systems, Wall Systems, Floor Systems, Moisture & Thermal Protection, Roof Systems, and Stairs & Lifts.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**

1	**Introduction to the course** Review of the materials from Structure 1 course (Building Structural Systems and Structural Materials and Building Foundations)	T	None
2	The Building- **Ground Floor Design**	T/P	**CW1**: Detail drawing of ground floor
3	**Vertical Structural and Non-structural Elements** (Columns, Masonry walls, Stud Frame Walls)	T/P	**CW2**: The detail drawings of "Brick Solid wall", "Brick Cavity Wall" and "Timber Wall Studding
4	**Floor Systems** (Reinforced Concrete, timber and steel intermediate floors)	T/P	**CW3**: Detail drawing of RC Floor Systems
5	**Suspended Ceilings**	T/P	**CW4**: Detailed drawing of frame and panel suspended ceiling
6	REVIEW	T/P	None
7	Working on the MIDTERM Project and Last feedback.	P	None
8	REVIEW **Mid-Term Project Submission**	T/P	None
9	**Wall Openings-Doors-Windows**	T/P	**CW5:** Detail drawing of opening systems
10	**Roofs** (Low and sloped roofs with RC, Precast Concrete, Timber, Steel, Cable and Composite materials.)	T/P	**CW6**: Detail drawing of flat and sloped roof
11	**Roofs** (Roof types for wide span buildings and Roof detailing)	T/P	**CW7**: Detail drawing of flat and sloped roof
12	**Stairs**	T/P	**CW8**: Detail drawing of staircase.
13	**Building Envelopes** (Glass, Multi-layered glass, Metal Concrete, Brick, Natural Stone, Plastic, Double skin) **Explanation of the Term Project**	T/P	None
14	**Working on Term Project- Detail Drawing**	P	None
15	**Portfolio Submission** **Working on Term Project- Detail Drawing and Model Making**	P	None
16	**Final exam and Final Project submission**		

Required Course Material(s) / Reading(s)/ Text Book(s)	Ching D. F., Barry Onouye & Douglas Zuberbuhler. (2014). Building Structures Illustrated. Hoboken, New Jersey: Wiley. **Call No: REF TA 658.C49 2014** Millais M., . (2017). Building Structures. New York: Routledge, Taylor & Francis Group. **Call No: REF TH 845 .M63 2017** Ballast D. K., . (2011). Interior construction & detailing for designers & architects sixth edition. Belmont: Professional Publications. **Call No: TH2025 .B35 2013** Deplazes A., . (2013). Constructing architecture. Basel: Birkhäuser.**Call No: TA403.4 .C65 2013** Lim J., . (2010). Eccentric structures in architecture. Amsterdam: BIS Publishers. **Call No: NA2728 .A35 2009** Macdonald A. J., . (2019). Structure and Architecture. New York: Routledge. **Call No: TA658.2.M333 2019** Charleson A., . (2015). Structure as Architecture. London: Routledge. **Call No: TA658.C454 2015**
Recommended Course Material(s)/ Reading(s) /Other	Brooker G., Stone S., . (2016). Form and structure in interior architecture. London: Fairchild Books an imprint of Bloomsbury Publishing Plc. **Call No: NA2850 .B75 2016 c.2** Lennartz M. W., Jacob-Freitag S., . (2015). New architecture in wood. Basel: Birkhäuser. **Call No: NA4110 .L45713 2015**

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term Project Submission	1	30
Portfolio Submission	1	20
Final Project Submission	1	50
TOTAL		100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME LEARNING OUTCOMES						
No	**PROGRAMME LEARNING OUTCOMES**	Level of Contribution (1-lowest/ 5-highest)				
		1	2	3	4	5
1	Understand architectural history, theory, and cultural heritage, including the relationship between local/vernacular traditions and global architectural discourse.		X			
2	Understand the technical knowledge and the principles of structural systems, building technology, environmental performance, and construction processes as integrated components of architectural design.					X
3	Comprehend sustainability, ecological sensitivity, and climate-responsive design principles and their application across different scales of the built environment.				X	
4	Recognize the legal, ethical, and professional frameworks governing architectural practice, including relevant codes, standards, universal ethical values, and the principles of project management and cost estimation.		X			

5	Apply creative and critical design thinking to develop holistic architectural solutions that respond to spatial, environmental, cultural, and social challenges at local, national, and global scales.				X	
6	Produce professional drawings, models, technical documentation, and digital/parametric visualizations that effectively communicate architectural proposals at all stages of design.					X
7	Conduct systematic, evidence-based research and apply critical evaluation methods to inform and validate design decisions throughout the design process.				X	
8	Integrate interdisciplinary knowledge — spanning art, engineering, ecology, and social sciences — to produce innovative and contextually sensitive design outcomes.			X		
9	Demonstrate professional and ethical responsibility, with sensitivity to environmental sustainability, socio-cultural diversity, and the well-being of communities served by architectural practice.				X	
10	Collaborate effectively in interdisciplinary and intercultural teams, demonstrating leadership, communication, and project management competencies in design and professional contexts.			X		
11	Communicate architectural ideas persuasively and clearly in verbal, visual, and written form to professional, academic, client, and public audiences.		X			
12	Engage in continuous self-reflection, lifelong learning, and active contribution to the evolving architectural profession at local, regional, and international levels.		X			

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching Hour theory and practice (X weeks * total course hours)	15	1	4	60
Mid-Term Project Submission	1	1	8	8
Portfolio Submission	1	1	2	2
Final Project Submission	1	1	12	12
TOTAL WORKLOAD				82
TOTAL WORKLOAD / 25				3.28
ECTS				3

ETHICAL RULES WITH REGARD TO THE COURSE

Plagiarism Disclaimer
Detected and undetected plagiarism is a serious offense at any time and can have devastating effects on your degree results and future professional life.
Plagiarism is easy to avoid if you ensure that you properly identify and acknowledge your sources and do not copy directly from visual examples, designs, or notes that have themselves been taken word-for-word from your sources.

	SDG 1: No Poverty	
	SDG 2: Zero Hunger	
	SDG 3: Good Health and Well-Being	
	SDG 4: Quality Education	
	SDG 5: Gender Equality	
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	
	SDG 9: Industry, Innovation and Infrastructure	X
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	X
	SDG 12: Responsible Consumption and Production	X
	SDG 13: Climate Action	X
	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16:Peace, Justice and Strong Institutions	
	SDG 17:Partnership for the Goals	X

ASSESSMENT DETAILS AND EVALUATION CRITERIA:

Final grades will be determined based on the course learning activities and the assessment details for the final examination or project, as outlined below, in accordance with the University's Education and Examination Regulations.
Students are required to attend at least 70% of the classes. The maximum allowable absenteeism is 30%.
Midterm Project Submission: 30%
Portfolio Submission: 20%
Final Project Submission: 50%

PREPARED BY	Asst. Prof. Dr. Nazgol Hafizi-
UPDATED	20.09.2024- Soad Abokhamis Mousavi (September 2025)
APPROVED	