COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Sustainable Buildings	INAD 425	1	**Theory** 3	**Practice** 0	3	5
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)	Asst. Prof. Dr. Tina Davoodi	E-mail: tina.davoodi@arucad.edu.tr Office: TI-OFF07
Course Objectives	This course introduces students to the principles and practices of sustainable residential design in response to the global climate crisis. It examines green building construction techniques, sustainable design strategies, unit planning principles, green building materials, energy-efficient heating and cooling systems, green roofs, and innovative solutions such as edible landscapes. The course aims to familiarize students with the criteria for designing livable, adaptable, and environmentally responsible homes.	

Course Learning Outcomes	**Students will be able to:**	**Teaching Methods**	**Evaluation Methods**
	Understand the fundamental principles and concepts of sustainable dwelling design, including green building materials and energy-efficient systems.	Weekly lectures, Guided Research	Midterm project/Final project
	Analyze the design and planning requirements of live-work dwellings and housing for aging in place.	Weekly lectures, Guided Research	Midterm project/Final project
	Evaluate flexible, growing, and adaptable housing models in response to changing user needs.	Weekly lectures, Guided Research	Midterm project/Final project

	Apply design strategies for row houses, prefabricated, and small-scale sustainable houses, including innovative approaches such as edible landscapes.	Weekly lectures, Guided Research	Midterm project/Final project
Course Content	• To provide students with knowledge of sustainable dwelling design, including green building materials and energy-efficient systems. • To provide the skills and knowledge associated with live-work dwellings and aging in place. • To improve students' ability to read, understand, and analyze flexible, growing, and adaptable housing models. • To provide students with an understanding of row houses, prefabricated, and small-scale houses.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Introduction to the course and syllabus.	T	Preparation is not required.
2	Introduction to the Principles of Sustainable Dwellings.	T/P	See the required reading.
3	Research.	P	Preparation is required.
4	Live-Work Dwellings; Aging in Place.	T/P	See the required reading.
5	Research.	P	Preparation is required.
6	Flexible growing home; Adaptable houses.	T/P	See the required reading.
7	Research.	P	Preparation is required.
8	Midterm Week	T/P	Preparation is required.
9	Prefabricated houses.	T/P	See the required reading.
10	Research.	P	See the required reading.
11	Row houses/terraced house	T/P	See the required reading.
12	Strategies for small houses.	T/P	See the required reading.
13	Research.	P	See the required reading.
14	Final Exam	T/P	Preparation is required.

Required Course Material(s) / Reading(s)/ Text Book(s)	Friedman, A. (2018). *Fundamentals of sustainable urban design*. Springer. **CALL NUMBER: NA2542.36 .F75 2021** Friedman, A. (2012). *Innovative houses: Concepts for sustainable living*. Laurence King Publishing. **CALL NUMBER: TH4860 .F75 2017** Pfeifer, G., & Brauneck, P. (2008). *Residential buildings: A typology*. Birkhäuser. **CALL NUMBER: NA7115 .P44 2015**

	Nussbaumer, L. L. (2012). *Inclusive design: A universal need*. Fairchild Books. **CALL NUMBER: REF NA2545.A1 N87 2018**
Recommended Course Material(s)/ Reading(s) /Other	Hutchison, K. (2015). *The new small house*. The Taunton Press. Mitchell, R. (2014). *Tiny house living: Ideas for building and living well in less than 400 square feet*. Betterway Home. Edwards, B., & Turrent, D. (2002). *Sustainable housing: Principles and practice*. Taylor & Francis. Veenhuizen, R. van. (2006). *Cities farming for the future: Urban agriculture for green and productive cities*. RUAF Foundation. Smith, R. E. (2010). *Prefab architecture: A guide to modular design and construction*. John Wiley & Sons. Friedman, A. (2010). *Narrow houses: New directions in efficient design*. Princeton Architectural Press. Schmidt, R., III, & Austin, S. (2016). *Adaptable architecture: Theory and practice*. Routledge.

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term	1	40
Quiz	0	
Assignment	0	
Project	0	
Field Study	0	
Presentation	0	
Studio Practice	0	
Other	0	
Contribution of Final Examination/Final Project/-Dissertation to the Final Grade	1	60
TOTAL		100

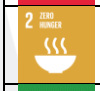
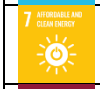
No	**PROGRAMME LEARNING OUTCOMES**	**Level of Contribution (1 = lowest / 5 = highest)**				
		1	**2**	**3**	**4**	**5**
KNOWLEDGE *Understanding and knowing — theoretical, historical, and conceptual foundations*						
1	Demonstrate comprehensive knowledge of visual and spatial design language, encompassing fundamental principles of form, function, space, material, ergonomics, ecology, and society, as well as technical knowledge, in the production of human-centered interior environments.		**X**			
2	Critically engage the history of interior architecture, art, and design, drawing on research methodologies to inform culturally sensitive and contextually grounded design practice.	**X**				

3	Understand interior architecture as a holistic and interdisciplinary profession, articulating the relationship between spatial design, architecture, art, and environmental stewardship.				**X**	
4	Understanding of theoretical, historical, cultural, ecological, and universal accessibility dimensions of interior design to inform responsible, inclusive, and environmentally conscious spatial decision-making.					**X**
SKILLS *Doing and making — technical, creative, and methodological abilities*						
5	Develop and communicate design concepts through diverse visualization tools — including hand drawing, and digital modeling — demonstrating competency in contemporary representational technologies for professional design communication.			**X**		
6	Produce technically proficient sketches, technical drawings, and documentation according to professional standards, applying both analog and digital tools in spatial problem-solving.	**X**				
7	Apply systematic, research-based critical thinking in design processes and problem-solving, addressing contemporary spatial and ergonomic demands with research-driven design strategies.					**X**
8	Produce design models, cost estimations, and technical documentation for project realization, incorporating sustainable design strategies and adaptive reuse methodologies for heritage and contemporary environments.	**X**				
COMPETENCIES *Professional behavior and attitude — ethical, creative, and lifelong practice*						
9	Articulate a personal creative vision and present design proposals verbally, visually, and textually across a range of media, upholding the high standards of creative excellence, considering legal and ethical practices.		**X**			
10	Demonstrate commitment to continuous self-development, lifelong learning, and professional ethics, contributing to the cultural and intellectual enrichment of local, regional, and global communities.		**X**			
11	Demonstrate proficiency in innovative design tools and emerging technologies, integrating traditional craftsmanship with contemporary digital methods to expand the boundaries of interior spatial design.		**X**			
12	Collaborate effectively in interdisciplinary and intercultural teams, demonstrating leadership, communication, and project management competencies in design and professional contexts.		**X**			

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching Hours (X weeks * total course hours)	14	1	3	42
Preliminary Preparation and self-study	14	1	3	42
Mid-Term	1	1	16	16
Quiz				

Assignment				
Project				
Field Study				
Presentation				
Studio Practice				
Final Project	1	1	20	20
Other				
TOTAL WORKLOAD				**120**
TOTAL WORKLOAD / 25				**4.8**
ECTS				**5**

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	**X**
	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	
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	**X**
	SDG 12: Responsible Consumption and Production	

	SDG 13: Climate Action	
	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16: Peace, Justice and Strong Institutions	
	SDG 17: Partnership for the Goals	

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 40%** **FINAL 60%**	
PREPARED BY	Asst. Prof. Dr. Tina Davoodi
UPDATED	18 September 2023.
APPROVED	