COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Environment and Design	INAD 207	1	**Theory** 1	**Practice** 2	2	2
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. Salar Salah Muhy Al-Din	E-mail:salar.aldin@arucad.edu.tr Office: TI- OFF 07	
Course Objectives	The course aims to give the student the climatic principles effective in the design process. The main emphasis is given on the definition of the problems of the main climatic zones around the world and the possible design solutions for those problems.		
Course Learning Outcomes	**Students will able to:**	**Teaching Methods**	**Evaluation Methods**
	Define and list key climatic principles, environmental factors, and basic terms related to architectural design, including climatic zones and their associated problems	Direct instruction technique, Preliminary preparation assignments	Midterm Exam
	Explain and interpret the relationships between design, environment, nature, society, mankind, and space, summarizing real-life environmental design challenges.	Panel discussions, Narrative-building activities	Midterm Exam
	Demonstrate and apply environmental design tools such as wind roses, sun-path diagrams, and bioclimatic charts to address climatic issues in building design.	Scenario-based assignments, Step-by-step exercises	Midterm Exam, Final Project Submission
	Examine and classify passive design strategies for heating, cooling, lighting, and acoustics, comparing their effectiveness in different climatic contexts.	Fieldwork simulations, Critique rounds	Mid-term Project Evaluation, Final Project Evaluation
	Develop and integrate innovative solutions that combine theory, technology, and	Model-building exercises,	Final Project Submission

	practice to create sustainable environmental designs from object to territorial scales.	Collaborative projects	
	Assess and critique architectural designs for thermal comfort, renewable energy integration, and acoustic performance, justifying recommendations based on environmental principles.	Peer review, reflective Evaluation	Final Project Submission
Course Content	This course provides a foundation for the design of the environment from the scale of the object to the building and to the larger territory. It engages with real-life problems that affect products, buildings, and cities across the world and requires an understanding of what makes a good environment for inhabitants. The outcome of this work will be the demonstration of: • active participation in class lectures • understanding different approaches to design with 'nature space' (where mankind can survive and live) as the centre • designing and producing innovative solutions on how space and objects are related to the environment.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Introduction of the course topics and basic terms.	T	See required reading.
2	Climatic Zones and Outside Environmental Aspects.	T	See required reading.
3	Environmental Design Basic Tools: Wind-Rose, Sun-Path, and Bioclimatic Charts.	T/P	See required reading.
4	Heat Exchange of Buildings and Materials' Thermal Characteristics.	T/P	See required reading.
5	Heating/Cooling Passive Design Strategies.	T/P	See required reading.
6	Glazing Orientation and Renewable Energy Systems in Buildings.	T/P	See required reading.
7	Salutogenic Architecture - Indoor Thermal Comfort.	T/P	See required reading.
8	Lighting Foundation in Design and Midterm.	T/P	See required reading.
9	Lighting Design Strategies in Architecture.	T/P	See required reading.
10	Acoustic Environment.	T/P	See required reading.
11	Acoustic Zoning (Part 1).	T/P	See required reading.
12	Acoustic Zoning (Part 2).	T/P	See required reading.
13	Acoustic Passive Design Strategies (Part 1).	T/P	See required reading.

14	Acoustic Passive Design Strategies (Part 2).	T/P	See required reading.
15	Critiques on the Final Project.	T/P	See required reading.
16	**Final Exam- Final Project Submission**		

Required Course Material(s) / Reading(s)/ Text Book(s)	Lechner, N. (2015). *Heating, cooling, lighting: Sustainable design methods for architects* (4th ed.). Wiley. **CALL NUMBER: REF TH7222. L33 2015** Maekawa, Z. (2019). *Environmental and architectural acoustics*. Spon Press. **CALL NUMBER: TH 1725.M345 2019**
Recommended Course Material(s)/ Reading(s) /Other	Ebrahim, Y. (2022, November 25). *Environmental architecture: Environmentalism, environmental design and planning issues* [Conference presentation]. Lecture 4B, Course BAR701, University of Nairobi. https://doi.org/10.13140/RG.2.2.35996.77442 Konstantinou, T., & Prieto Hoces, A. (2018). Environmental design principles for the building envelope and more: Passive and active measures. In T. Konstantinou, N. Cukovic, & M. Zbasnik (Eds.), *Energy—resources and building performance* (pp. 147–180). TU Delft OPEN Publishing. https://books.bk.tudelft.nl/index.php/press/catalog/book/isbn.9789463660341

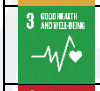
ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT in %**
Mid-Term written Exam	1	**40**
Final submission (Project)	1	**60**
TOTAL		**100**

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 / Practice Hour (weeks/total course hours)	15		2	30
Mid-Term (including preliminary preparation and self-study)	1		6	6
Assignments (including development of the project)	1		9	9
Final Exam (including completing the final project)	1		9	9
TOTAL WORKLOAD				**54**
TOTAL WORKLOAD / 25				**54/25= 2.16**
ECTS				**2**

ETHICAL RULES ABOUT 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	×
	SDG 10: Reduced Inequalities	
	SDG 11: Sustainable Cities and Communities	×
	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%. **Mid-term exam 40%** **Final project 60%**	
PREPARED BY	Asst. Prof. Dr. Salar Salah Muhy Al-Din
UPDATED	07\10\2025
APPROVED	