COURSE SYLLABUS						
Course Title	**Course Code**	**Semester**	**Course Hour/Week**		**Credit**	**ECTS**
Human Factors and Ergonomics	INAD204	2	**Theory** 2	**Practice** 0	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)	Prof. Dr. Burcu Toker	E-mail: burcu.toker@arucad.edu.tr **Office**: RO-OFF08
Course Objectives	The course focuses on the application of knowledge about human capabilities and limitations to the design of workplaces, products work methods and jobs for optimal safety, efficiency, productivity and comfort.	

	Students will be able to:	**Teaching Methods**	**Evaluation Methods**
Course Learning Outcomes	**Explain** the strategic role of ergonomics in design.		Quiz, Midterm, Class Participation
	Describe meaning and importance of ergonomics.		Midterm and Final exams
	Apply design principles related to human physical capabilities and limitations to the design of human-machine systems.		Midterm and Final exams
	Apply design principles related to human sensory and cognitive, capabilities and limitations to the design of human-machine systems. .		Quiz, Midterm and Final exams
	Analyze designs according to ergonomics principles.		Quiz, Midterm and Final exams
	Design and Develop human-machine systems according to the design principles		Quiz, Midterm and Final exams

	Present design proposals clearly and professionally and develop proper recommendations to correct human factors deficiencies in human-machine systems.		Final Exam
Course Content	This course provides the student with a basic knowledge of human factors design principles and the nature of human interaction with their physical work environment. The course introduces, ergonomics, system design, and the nature of human performance in the workplace including the concepts of physical and cognitive ergonomics.		

COURSE OUTLINE/SCHEDULE			
Week	**Topic**	**Implementation (theory/practice)**	**Required Reading, Preliminary preparation**
1	Introduction Definition of ergonomics and human factors.	T	
2	Human Factors Basics	T	
3	Anatomy, Posture and Body Mechanics	T	
4	Anthropometric Principles in Workplace, Equipment and Product Design	T	
5	Anthropometric Principles in Workplace, Equipment and Product Design	T	
6	Vision, Light and Lighting	T	
7	Hearing, Sound and Noise	T	
8	Hearing, Sound and Noise		
9	Displays, Controls and Human-Machine Interactions	T	
10	Cognitive Ergonomics	T	
11	Cognitive Ergonomics	T	
12	Worksystem Design	T	
13	Worksystem Design	T	
14	Ergonomics and Safety	T	
15	Ergonomics in Product Design	T	

16	Ergonomics in Product Design		
17	**Final exam**		

Required Course Material(s) / Reading(s) / Text Book(s)	Norman, D. (2013). *The design of everyday things*. Basic Books. **Call number: TS171.4 .N67 2013**
Recommended Course Material(s) / Reading(s) / Other	Stanton, N. (2005). *Handbook of human factors and ergonomics methods*. CRC Press. **Call number: TA166 .H275 2004**

ASSESSMENT		
Learning Activities	**NUMBER**	**WEIGHT (%)**
Mid-Term	1	40
Quiz	1	10
Assignment	-	-
Project	-	-
Field Study	-	-
Presentation / Seminar	-	-
Studio Practice	-	-
Other (class participation)	-	-
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade	1	50
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.					
2	Critically engage the history of interior architecture, art, and design, drawing on research methodologies to inform culturally sensitive and contextually grounded design practice.					

No	PROGRAMME LEARNING OUTCOMES	Level of Contribution (1 = lowest / 5 = highest)				
		1	2	3	4	5
3	Understand interior architecture as a holistic and interdisciplinary profession, articulating the relationship between spatial design, architecture, art, and environmental stewardship.					
4	Understanding of theoretical, historical, cultural, ecological, and universal accessibility dimensions of interior design to inform responsible, inclusive, and environmentally conscious spatial decision-making.					
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.					
6	Produce technically proficient sketches, technical drawings, and documentation according to professional standards, applying both analog and digital tools in spatial problem-solving.					
7	Apply systematic, research-based critical thinking in design processes and problem-solving, addressing contemporary spatial and ergonomic demands with research-driven design strategies.					
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.					
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.					
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.					
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.					

No	PROGRAMME LEARNING OUTCOMES	Level of Contribution (1 = lowest / 5 = highest)				
		1	2	3	4	5
12	Collaborate effectively in interdisciplinary and intercultural teams, demonstrating leadership, communication, and project management competencies in design and professional contexts.					

ECTS / STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching / Practice Hour (weeks/total course hours)	16	1	2	32
Preliminary Preparation and Self-study				
Midterm Exam	1	1	6	6
Quiz	1	1	4	4
Final Exam	1	1	10	10
TOTAL WORKLOAD				
TOTAL WORKLOAD / 25				**52**
ECTS				2.08

ETHICAL RULES WITH REGARD TO THE COURSE

Plagiarism Disclaimer

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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	X
	SDG 4: Quality Education	X
	SDG 5: Gender Equality	X
	SDG 6: Clean Water and Sanitation	
	SDG 7: Affordable and Clean Energy	
	SDG 8: Decent Work and Economic Growth	X

	SDG 9: Industry, Innovation and Infrastructure	X
	SDG 10: Reduced Inequalities	X
	SDG 11: Sustainable Cities and Communities	X
	SDG 12: Responsible Consumption and Production	X
	SDG 13: Climate Action	
	SDG 14: Life Below Water	
	SDG 15: Life on Land	
	SDG 16:Peace, Justice and Strong Institutions	X
	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 (40%), Quiz (10%) and Final Exam (50%) marks will be combined to give an overall assessment mark for this course.**	
PREPARED BY	Prof. Dr. Burcu Toker (February 2026)
UPDATED	
APPROVED	