

PART I (Senate Approval)							
Offering School	Antalya Bilim University-Faculty of Fine Arts and Architecture						
Offering Department	Architecture						
Program(s) Offered to	Architecture					Area Elective	
Course Code	ARC 2053						
Course Name	Ergonomics in Architectural Design						
Language of Instruction	English						
Type of Course	Theory						
Level of Course	Undergraduate						
Hours per Week	Lecture: 3	Laboratory:	Recitation:	Practical:	Studio:	Other:	
ECTS Credit	3						
Grading Mode	Letter Grade						
Pre-requisites	None						
Co-requisites	None						
Registration Restriction	None						
Educational Objective	<ul style="list-style-type: none"> To understand the principles of human factors and the relationship to environmental design. To understand issues of ergonomic design in the built environment To learn metrological analysis of the anthropometrics relationship to ergonomic environmental design. 						
Course Description	This course introduces students to concepts of human factors, the anthropometric aspects of ergonomics that applies the related information to the design of interior spaces. Course materials relate to applications that follow the principles of human factors and ergonomic method. The purpose of the course is to help students to learn to apply the principles of human factors/ergonomics to designing interior spaces. Students will learn about the principles of human factors/ ergonomics, and anthropometrics relationship to environmental design, and metrological analysis through assignments and practices.						
Learning Outcomes	LO1	Explain the relevance of human factors and anthropometrics to environmental design.					
	LO2	Explain the importance of ergonomic design in the built environment.					
	LO3	Analyze anthropometric dimensions for designing interior spaces and products for children, men, women, elderly and physically challenged individuals.					
	LO4	Demonstrate design analysis that follows the principles of human factors/ ergonomics.					
	LO5	Identify and relate factors affecting human performance in the interaction with products.					
PART II (Faculty Board Approval)							
Basic Outcomes (University-wide)		Program Outcomes	LO1	LO2	LO3	LO4	LO5
	PO1	Ability to communicate effectively and write and present a report in Turkish and English.	X	X	X	X	X
	PO2	Ability to work individually, and in intra-disciplinary and multi-disciplinary teams.	X	X	X	X	X
	PO3	Recognition of the need for life-long learning and ability to access information, follow developments in science and technology, and continually reinvent oneself.	X	X	X	X	X
	PO4	Knowledge of project management, risk management, innovation and change management, entrepreneurship, and sustainable development.	X	X	X	X	X
	PO5	Awareness of sectors and ability to prepare a business plan.					
	PO6	Understanding of professional and ethical responsibility and demonstrating ethical behavior.	X	X	X	X	X
Faculty Specific Outcomes	PO7	Gain the ability of conceptualizing, applying, analyzing, synthesizing and evaluating information effectively (Critical Thinking)	X	X	X	X	X
	PO8	Produce innovative ideas and products with creativity (Creativeness).	X	X	X	X	X
	PO9	Gain the ability of leadership, entrepreneurship and self-leadership skills (Leadership and Entrepreneurship).	X	X	X	X	X
	PO10	Care about the ethical values and principles; behave in accordance with these in professional and social life (Ethical Behavior).					
	PO11	Understand, define and reach the information that they need; use information effectively and share it with others (Information Literacy).	X	X	X	X	X
	PO12	Use information effectively and communication technologies while learning, and can share their knowledge and experience with others using technology and visual means (Information and Communication Technology Literacy).	X	X	X	X	X

Discipline Specific Outcomes (program)	PO13	Learns the concepts of architectural design and theories of architecture as well as the intellectual, historical and cultural background to evaluate them from a critical perspective and use them in developing design solutions. One can express one's solutions verbally and in written form. (Knowledge and Ability)	X	X	X	X	X
	PO14	Knows to express each stage of the design process formally by using hand drawings together with the European Computer Driving Licence and other software technologies. (Knowledge and Communication Competence)					
	PO15	Designing space (environment, construction, building) on different scales that are sensitive to the natural and built environment within the framework of basic design and architectural principles. One also knows research methods. (Knowledge and Ability)	X	X	X	X	X
	PO16	Speak at least one foreign language at B1 General Level of European Language Portfolio to express oneself and to follow developments in the field of architecture. (Knowledge and Communication Competence)					
	PO17	Executes an independent project or to take responsibility in multidisciplinary studies, to communicate effectively and share knowledge and competency during the design process. (Competency to work independently and take responsibility)					
	PO18	To knowledge and understanding to analyze building design and systems regarding architectural practice (from prehistoric times to the present). (Knowledge)					
	PO19	Develops a design that respectable to cultural heritage and sustainable by recognizing historical and cultural assets and understanding the importance of these values. (Knowledge and Ability)					
	PO20	The necessary knowledge and ability about contemporary restoration theories and preparation of restoration project by using research, documentation and different measurement methods in the process of documenting the current state of					
	PO21	Produces sustainable solutions to current problems by following the developments and technologies in the field of production. (Ability)					
	PO22	Knows to develop designs about environmental and social sustainability principles, the issues related to disasters and accessible designs that meet community needs. (Knowledge and Ability)	X	X	X	X	X
	PO23	Gains the ability to use modern technologies in building and environmental design, to develop and produce innovative solutions; learns necessary information about building materials, techniques and structural behaviors, the laws, regulations and standards and includes them in the design process. (Knowledge and Ability)					
	PO24	To gain the basic knowledge of lighting, acoustics, air conditioning and energy use in the design of environmental systems. (Knowledge)					
	PO25	Knows the historical development of structural systems, types of structural elements such as foundation, wall, flooring, stairs, roof, design, and construction techniques of these elements and applies this information in the projects. (Knowledge and Ability)	X	X	X	X	X
	PO26	Has competence in project management, organization, planning, and leadership for the realization of professional practice and informs individuals and institutions on issues related to a field and shares one's suggestions for solutions to the experts or non-experts in verbally and written form. To produce collaborations and projects with the awareness of social responsibility (Competence to take responsibility and social and Ability)	X	X	X	X	X
PO27	Aware of lifelong learning and identifying the necessary needs for professional development and self-development. (Learning Competence)	X	X	X	X	X	

	PO28	Has an awareness of professional and ethical behavior; collects data considering social, environmental, and ethical results. One is responsible for the environment, the professional problems and provides professional services like occupational health and safety within the legal frameworks. (Field Specific Competence)	X	X	X	X	X	
PART III (Department Board Approval)								
Course Subjects, Contribution of Course Subjects to Learning Outcomes, and Methods for Assessing Learning of Course Subjects	Subject	Week	Subject Explanation	LO1	LO2	LO3	LO4	LO5
	S1	1	Introducing Ergonomics, welcome and content details, definition, context and history of ergonomics	X	X	X	X	X
	S2	2	Measuring human dimensions, Anthropometric measures and procedure for anthropometric design. Studio work 1: Measure the dimensions of yourself according to the paper that is given by the lecturer.	X	X	X	X	X
	S3	3	Important anthropometric data for disabled in interior design. Studio work 3: Walk inside the university. Find the problems for the disabled people. Write them down.	X	X	X	X	X
	S4	4	Importance of ergonomics in furniture design Workplace ergonomics Studio work 4: Talk with a person who works at the office. Also examine the office by yourself. What problems do they have? Write them down.	X	X	X	X	X
	S5	5	Midterm explanation & study – critiques 1	X	X	X	X	X
	S6	6	Midterm study – critiques 2	X	X	X	X	X
	S7	7	Midterm study – critiques 3	X	X	X	X	X
	S8	8	Midterm week	X	X	X	X	X
	S9	9	The concept of comfort; relationship between comfort concept and ergonomic design in interior design, Radiation factors Final work 1: Visit library, ground floor atelier, gastronomy kitchen, lecturer room, dining hall (only one).	X	X	X	X	X
	S10	10	Illumination Final work 2: Draw the plan with furnitures.	X	X	X	X	X
	S11	11	Noise control Final work 3: Examine the room with all ergonomic conditions.	X	X	X	X	X
	S12	12	Interior weather conditions. Final work 4: Examine the room with all ergonomic conditions.	X	X	X	X	X
	S13	13	Student Presentations	X	X	X	X	X
S14	14	Student Presentations	X	X	X	X	X	
Assessment Methods, Weight in Course Grade, Implementation and Make- Up Rules	No	Type		Weight	Implementation Rule		Make-Up Rule	
	A1	Final		40%	Exam date will be determined during the semester.		If the student presents an official document acceptable according to the school regulations, a make-up exam will be held.	
	A2	Studio work & presentation		30%	Student has to load their homework everyweek during the class		Mak-up opportunities available but students total point will be calculated over 60.	
A3	Midterm		30%	Exam dates will be determined during the semester.		If the student presents an official document acceptable according to the school regulations, a make-up exam will be held.		
Evidence of Achievement of Learning Outcomes	Students will demonstrate learning outcomes through class activities, debates, presentations and practice papers. These activities reflect a transdisciplinary approach, asking the student to make connections between different topics. Generally every topic is tested with at least one exam question.							
	Upon successful completion of all assessment methods, the total scores will be averaged and converted into a final letter grade using the following percentages and grading criteria.							

Method for Determining Letter Grade	ASSESSMENT METHOD	EFFECT ON GRADING	GRADE	MARKS	VALUE	GRADE	MARKS	VALUE
	Midterm	30%	A+	100	4,00	C+	60-64	2,40
	Final	40%	A	95-100	4,00	C	55-59	2,20
	Studio work & presentation	30%	A-	85-94	3,70	C-	50-54	2,00
			B+	80-84	3,30	D+	45-49	1,70
			B	75-79	3,00	D	40-44	1,50
		B-	65-74	2,70	F	0-39	0,00	
Öğretim Metodları, Tahmini Öğrenci Yüğü	No	Method	Explanation				Hours	
	Time applied by Instructor							
	1	Lecture	Course Teaching Hours				3 hours (13 weeks)=39 hrs	
	2	Interactive Lecture						
	3	Recitation						
	4	Laboratory						
	5	Practical	Studio work				2 hours (5 weeks)=10 hrs	
	6	Field Work						
	Time expected to be allocated by student							
	7	Project	Presentations				1 hours (5 weeks)=5 hrs	
	8	Homework	midterm				1 hours (1 weeks)=1 hrs	
	9	Pre-class Learning of Course Material	final				1 hours (1 weeks)=1 hrs	
	10	Review of Course Material	Midterm preparation				1 hours (5 weeks)=5 hrs	
	11	Studio	Final preparation				1 hours (13 weeks)=13 hrs	
12	Office Hour	meetings				1 hours (1 weeks)=1 hrs		
TOTAL						75 hours		
IV. PART								
Instructor	Name							
	E-mail							
	Phone Number							
	Office Number							
	Office Hours	6 hours (according to school semester)						
Course Materials	Mandatory	Neufert, E. (2018) Neufert Yapı Tasarımı, 2nd edition, ISBN: 6053339571 Toka, C. İnsan-Araç Bağlantısında Ergonomik Tasarım İlkeleri, MSÜ Yayınları. Grandjean, E., (1973) Ergonomics of the Home, Taylor and Francis						
	Recommended	Sanders, M.M. & McCormick, E.J. (1993) Human Factors in Engineering & Design, 7th ed. McGrawHill, NY. Pheasant, S., (2000) Bodyspace, Taylor and Francis Panero, J. & Zelnick, M. (1979). Human Dimension and Interior Space: A Source Book of Design Reference Standards, Watson-Guptill. Salvendy, G. (2006). Hand book of Human Factors and ergonomics, 3rd edition, Wiley.Lang, J. (1987). Lang, J. (1987). Creating architectural theory: The role of the behavioral sciences in environmental design, NY: Van Nostrand Reinhold.						
Other	Scholastic Honesty	Violations of scholastic honesty include, but are not limited to cheating, plagiarizing, fabricating information or citations, facilitating acts of dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Any for of scholastic dishonesty is a serious academic violation and will result in a disciplinary action.						
	Students with Disabilities	Reasonable accommodations will be made for students with verifiable disabilities.						
	Safety Issues							
	Flexibility	Circumstances may arise during the course that prevents the instructor from fulfilling each and every component of this syllabus; therefore, the syllabus is subject to change. Students will be notified prior to any changes.						