



**ESOGU Faculty of Art and Design
Industrial Design Department
COURSE INFORMATION FORM**

SEMESTER	Fall
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COURSE CODE	1411xx	COURSE NAME	Human Factors in Industrial Design I
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SEMESTER	WEEKLY COURSE PERIOD			COURSE OF			
	Theory	Practice	Laboratory	Credit	ECTS	Type	Language
3	2	0	0	2	3	COMPULSORY (X) ELECTIVE ()	Turkish

COURSE CATEGORY				
Basic Education	Design	Natural and Applied Science	Social Science	Art
	X	X		

ASSESSMENT CRITERIA

	Evaluation Type	Quantity	%
MID-TERM	1st Mid-Term	1	40
	2nd Mid-Term		
	Quiz		
	Homework		
	Project		
	Report		
	Others (.....)		

FINAL EXAM		1	60
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PREREQUIEITE(S)	N/A
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COURSE DESCRIPTION	This course is designed to teach the basic principles of Human Factors in industrial design. The course content covers information on humans' physical characteristics and constraints defined within Anthropometry and Biomechanical sciences.
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COURSE OBJECTIVES	This course aims to teach students the physical human characteristics and constraints required to design safe products.
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ADDITIVE OF COURSE TO APPLY PROFESSIONAL EDUCATION	This course teaches you how to prevent health risks that may arise from product-user interaction.
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COURSE OUTCOMES	<ol style="list-style-type: none"> 1. Determine the Anthropometric and Biomechanical data needed to design a safe product. 2. Apply the Anthropometric and Biomechanical data needed to design a safe product. 3. Determine whether any product is safe in an Anthropometric and Biomechanical context.
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TEXTBOOK	<ol style="list-style-type: none"> 1. Pheasant, S. (1996), Bodyspace-Anthropometry, Ergonomics and the Design of Work, Taylor & Francis Inc, USA, UK. 2. Panero, J., & Zelnik, M. (1979). Human Dimensions and Interior Space: A Source Book of Design Reference Standarts. London: The Architectural Press Ltd. 3. Tilley, A. R. (2001). The measure of man and woman: human factors in design. John Wiley & Sons.
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OTHER REFERENCES	<ol style="list-style-type: none">1. Stanton, N. A. (1997), Human Factors in Consumer Products. Taylor & Francis Inc, USA, UK.2. Karwowski, W.; Soares, M. M.; Stanton, N. A. (2011) Human Factors and Ergonomics in Consumer Product Design: Uses and Applications. Taylor & Francis Inc, USA, UK.3. Leger, D. L; Nordin, M.; Ozkaya, N. (2013), Fundamentals of Biomechanics: Equilibrium, Motion, and Deformation. Springer4. Salvendy G. (2012), Handbook of Human Factors and Ergonomics. John Wiley & Sons, Incorporated
TOOLS AND EQUIPMENTS REQUIRED	N/A

WEEKLY COURSE SYLLABUS

WEEK	TOPICS
1	Introduction to Ergonomics
2	Introduction to Anthropometry
3	Principles of Anthropometric Data Collection – Data Sources and Measurement Tools
4	Principles of Anthropometric Data Collection – Standard Postures and Basic Dimensions
5	Anthropometric Data Application Principles – Constraints and Criteria
6	Anthropometric Data Application Principles - Percentages
7	Anthropometric Data Application: Calculating Anthropometrically Appropriate Table and Chair Dimensions
8	Mid-Term
9	Introduction to Biomechanics
10	Biomechanical Motions – Reference Planes and Types of Motion
11	Biomechanical Movements - Head and Eye Anthropometry and Kinetics
12	Biomechanical Movements – Upper Extremity Anthropometry and Kinetics
13	Biomechanical Movements – Lower Extremity Anthropometry and Kinetics
14	Safe Product Design in Anthropometric and Biomechanical Context
15	Product Safety Analysis Methods in Anthropometric and Biomechanical Context
16	Final Exam

NO	PROGRAM OUTCOMES	Contribution Level		
		3	2	1
1	Within cultural, historical and artistic context the ability to integrate theoretical knowledge about production and consumption mechanisms into the design practice;			X
2	The ability to plan the design process, to choose and use appropriate methods and techniques;	X		
3	The ability to identify design problems and related sub-problems and to produce creative solutions with a critical and dialectical approach;		X	
4	The ability to design in terms of spatial thinking using design principles and elements;		X	
5	The ability to make applications in the interaction of aesthetics and function using design elements and means and to evaluate these applications;			X
6	The ability to visualize and present using two and three dimensional design tools;			X
7	The ability to follow and apply technological developments, current design approaches, sustainable production methods, materials and innovations in the field of informatics in design projects;			X
8	The ability to use field knowledge in industrial design projects by considering the needs and interests of the society and target users within the scope of environmental awareness, professional ethics and the laws;	X		
9	The ability to carry out the design process effectively individually or in a team;			X
10	The ability to take an active role in discipline-specific or interdisciplinary studies at the national and international levels.			X

1: None. 2: Partial contribution. 3: Complete contribution.

Instructor(s): Asst. Prof. Dr. Nazife Aslı KAYA ÜÇÖK

Signature:

Date: