

ACADEMIC YEAR 2026/27. 1ST SEMESTER

Name of subject: Ergonomics		NEPTUN-code: RTXER1EBNF	Number of hours: lec+gs+lab 1+1+0	Credit: 4 Requirements: term mark
Course coordinator: Gabriella Oroszlány Ph.D.		Title: assistant lecturer	Prerequisite: Form Design I.	
<i>Curriculum:</i>				
The concept, purpose and stages of development of ergonomics. The man-product and machine system. Anthropometric knowledge, use of anthropometric data in design. Physiological and psychological basis of ergonomics: vision, hearing, smell, touch, perception, memory. Product ergonomics. The user environment. Design approaches. Product ergonomic quality. Ergonomic criteria. Biomechanical principles, human force and torque. Design for specific user groups (significantly different, limited). Product development process, user involvement in product development. Ergonomics of product use. Ergonomics of product information, advertising, packaging, and product documentation design. Environmental ergonomics. Ergonomics of the working environment.				
<i>Detailed schedule of the course:</i>				
Week	Topics of lectures and practices/labs			Lecturer
1	Introduction to ergonomics. Concept of ergonomics, main stages of its development and evolution - contact lesson with ONLINE learning material.			Erika Jókai PhD
2	Clothing physiology.			Erika Jókai PhD
	Ergonomics independent research project.			
3	Basics of anthropometry. Human characteristics to be considered in design. Application of anthropometric considerations in ergonomic design.			Erika Jókai PhD
4	Fundamentals of Anthropometry. Ergonomics in design. Use of anthropometric measurement tools in practice.			Erika Jókai PhD
	Anthropometry assignment.			
5	Perception I: perception in general. Vision, pattern recognition.			Erika Jókai PhD
6	Ergonomics of the built environment (home) I. Classification and characteristics of our dwellings. Kitchen ergonomics, minimum required areas, and movement and space-use needs.			Erika Jókai PhD
	Research assignment - report I.			
7	Perception II: attention, memory.			Erika Jókai PhD
8	Ergonomics of the built environment (home) II. Bathroom ergonomics, minimum required areas, movement and space use needs.			Erika Jókai PhD
	Thematic research assignment - report II.			
9	Body composition and some physiological characteristics. The standing posture. The sitting posture, RSI-CTD. Eye problems in screen-based workplaces. Proposed layout of the seated computer workstation.			Erika Jókai PhD
10	Ergonomics of the Built Environment (Home) III Ergonomics of anterooms, living rooms, bedrooms, minimum required areas, movement and space use needs.			Erika Jókai PhD
	Thematic research assignment - report III			
11	Office ergonomics - computer workplace design. Introduction to software ergonomics.			Erika Jókai PhD

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12	Ergonomics of the built environment (home) IV Ergonomic design for specific user groups, minimum required areas, mobility and space usage needs.	Erika Jókai PhD
	Thematic research assignment - report IV	
13	Seminary Test - deadline for submission of assignments issued during the semester.	Erika Jókai PhD
14	Supplementary Test. Supplementary submissions. Evaluation.	Erika Jókai PhD
Mid-term requirements:		
<i>Attendance at lectures and practices/labs</i> Participation in lectures and practices is compulsory. The number of absences is determined by the Study and Examination Regulations (the number of absences may not exceed 30% of the total number of hours per semester).		
<i>Seminary tests, reports, essays, etc.</i> Week 13 – Seminary Test Week 13 - Deadline for submission of the assignments Week 14 - Supplementary Test Week 14 - Supplementary assignments.		
<i>The method of obtaining a signature/creating a practice mark:</i> The mid-term grade is conditional on: - valid participation in the exercises, - the assignments, submitted and accepted in the form of a report on the topics of the exercises, - 1 final paper of approximately 60 minutes, graded with a satisfactory mark (the final paper will consist of material from the online lectures and the exercises - it will be a test and will be different from the lectures). To obtain a satisfactory final examination grade, the student must achieve at least 40% of the maximum mark, and you may make up the exam once. The mid-semester grade will be based on the final examination result. The relevant provisions of the current Study and Examination Regulations apply to replacing the mid-term mark.		
Professional competencies:		
– Knowledge of basic design principles and methods, major manufacturing processes and operational procedures. – Knowledge of basic ergonomic and psychological methods, rules and standards for the design of industrial products. – Ability to design simple products in terms of form and construction, considering the constraints of production technology, expected costs and environmental impact. – Ensure equal access to the principle of equal opportunity in problem solving.		
Literature:		
1. Ergonomics In Product Design. Sendpoints Publishing Co. Ltd. Honkong 201 . • ISBN13 9789887849377 2. Karwowski Waldemar: Handbook on Standards and Guidelines in Ergonomics and Human Factors. Taylor&Francis Inc., 2005. ISBN13 (EAN): 9780805841299 3. https://elearning.uni-obuda.hu/ electronic notes and aids prepared by the instructor		