

ACADEMIC YEAR 2026/27. 1ST SEMESTER

Name of subject: Product Design Methodology and Design (blended)		NEPTUN-code: RTXTM1EBNF	Number of hours: lec+gs+lab 4+0+0	Credit: 4 Requirements: exam
Course coordinator: Daniella Koós DLA		Title: associate professor	Prerequisite: Form Design I.	
Curriculum:				
Product life cycles and the product environment. Design schools. The product development process, exploring and defining the product idea. Optimisation of product characteristics. Developing a product concept. Product features. Product functions, technical (materials, technologies, ergonomics), economic (marketing, energy optimisation, technology), psychological (impact on the consumer, safety), sociological (prestige, brand), ecological (resource management), and documentary (historical and contemporary stylistic interpretation) functions and methods for the design of industrial products. Cost factors in design. Design for manufacturability. Historical periods, subjects and creators of industrial design. Design aspirations and opportunities in the past and present. Design principles. Functions of industrial design, design process. Industrial Revolution. Art Nouveau. Functional design. Progressive and conservative modernism. Industrial design after the First World War. Avant-garde, Constructivism, Bauhaus. Art Deco in Europe and America. The American model of commercial design. European design after World War II. Design in the second half of the 20th century. Organic design. Systematic design. Design trends in the early 21st century.				
Detailed schedule of the course:				
Week	Topics of lectures and practices/labs			Lecturers
1	Introduction to the course content and assessment. What is design? – Concept and terms. Design thinking. Multicultural and multifunctional design.			Dr. habil Edit Csanák DLA (onsite)
2	Design product features. Applied arts - Art, Craft, Design.			Dr. habil Edit Csanák DLA (onsite)
3	The beginnings of industrial design, the 19th century and design. Industrial approach to design, areas of design (elite, product, styling, industrial design).			Dr. habil Edit Csanák DLA (onsite)
4	The product world. The 4 stages of the product development. Product functions for industrial product design. Approaches to product design. Basic concepts of product design: product, product life cycle, need and function. Global trends in product design, ecology (management of resources). Creative group techniques. The concept of style and trends (contemporary style interpretation). Positioning. Innovation.			Dr. habil Edit Csanák DLA (onsite)
5	Seminary test I. (Product Design Methodology I. - Online, Moodle)			Dr. habil Edit Csanák DLA (online)
6	Art Nouveau I-II. Vegetal and organic trends I-II. Geometric movement. Progressive modernism – The Avantgarde Design. Art deco.			Dr. habil Dóra Papp-Vid DLA (blended)
7	Bauhaus and its influence on 20th century design. Conservative modernism. Commercial design - American elite design. Sustainability and eco-design.			Dr. habil Dóra Papp-Vid DLA (blended)
8	Elite design - New modernism in Europe. Neoavantgarde. Postmodern. The last decades contemporary design aspirations. Social design.			Dr. habil Dóra Papp-Vid DLA (blended)
9	Seminary test II. (Design - Online, Moodle)			Dr. habil Dóra Papp-Vid DLA (blended)
10	Value-analysis product design methodology (function tree, requirements list). Product functions 1: technical (materials, technology, ergonomics); business (marketing, energy optimization, technology) and globalization. Product functions 2: documentary (historical). Product functions 3: psychological (consumer, security) and sociology (prestige, brand).			Dr. habil Edit Csanák DLA (onsite)

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11	Break (TDK)	(-)
12	Rector's Break	(-)
13	Seminary test III. (Product Design Methodology II. - Online, Moodle)	Dr. habil Edit Csanák DLA (online)
14	Supplementary Seminary Tests. Evaluation of the Semester	Dr. habil Csanák Edit DLA (online)
Mid-term requirements:		
<i>Participation in occupations:</i> The Design part of the course is taught online, and the Product Design Methodology part is taught through contact lectures. Attendance of the lectures and continuous learning of the online course materials is recommended.		
<i>Seminary tests, reports, essays, etc.</i> 5th week Seminary Test 1. (Lect. of Dr. Edit Csanák: Product Design Methodology - Online, Moodle) 9th week Seminary Test 2. (Lectures of Dr. Dóra Papp-Vid DLA: Design - Online, Moodle) 13th week Seminary Test 3. (Lect. of Dr. Edit Csanák: Product Design Methodology - Online, Moodle) 14th week Supplementary tests. Evaluation.		
<i>The method of obtaining a signature and examination conditions:</i> Successful completion of both tests is a prerequisite for obtaining the signature. Students who successfully complete all course requirements may be awarded an offered grade and are exempt from taking the final examination. The offered grade is calculated based on the average of the Product Design Methodology test scores, which account for 50% of the final grade, and the Design test score, which accounts for the remaining 50%. The examination is conducted in written form through the electronic submission of the examination assignment, in accordance with the examination task requirements.		
Professional competencies:		
– Knowledge of basic design principles and methods, major manufacturing processes and operational procedures. – Knowledge of the basic rules and technological constraints for shaping products and finding the right balance between content and form. – Knowledge of the main raw materials used in product design, their production and conditions of use. – Knowledge of the basic construction designs and the principles of their sizing. – Knowledge of learning, knowledge acquisition, data collection methods, their ethical limitations and problem-solving techniques in product design. – Knowledge of the historical periods of industrial design, its prominent designers and typical subjects. – Knowledge of the basic rules of intellectual property management. – Ability to apply the principles and methods of calculation and modelling of industrial product design literature. – Understand and use online and printed literature in Hungarian and at least one foreign language typical of his/her field of specialisation. – Know and use the language and special terms of his/her field of specialisation in Hungarian and at least one foreign language. – Knowledge of the main analogies between natural and technical systems and their application in design. – Ability to consider the historical, cultural, socio-economic and industrial environment aspects in the process of industrial design and product development.		
Literature:		
1. Luz Del Carmen Vilchis Esquivel: Design Methodology: Theoretical Fundamentals. Authorhouse, 2014. ISBN13 (EAN): 9781463391782 2. https://elearning.uni-obuda.hu/ electronic notes and aids prepared by the instructor		