

2026/27. 1. ACADEMIC YEAR

Name of subject: Form Design and Modelling II.		NEPTUN-code: RTXFO2EBNF	Number of hours: lec+gs+lab 0+0+3	Credit: 4 Requirements: term mark
Course coordinator: Dóra Papp-Vid DLA		Title: associate professor	Prerequisite: Form Design and Modelling I.	
Curriculum:				
Developing a creative design approach to the design of industrial products, understanding the concept of design in design. To learn about the properties of different types of materials, both trade-specific and modelling materials, and to experiment with their shaping possibilities. Exploring and analysing technical, structural, functional and aesthetic solutions through innovative experiments in spatial form design. Bionics as a source of inspiration. The role of information exploration in the design process. The application of design principles in the design process. Product design: design principles, defining shape characteristics, aesthetic and technical interpretation and design of dimensions. Functional analysis. Acquisition of the most important working concepts in the field for subsequent design tasks.				
Detailed schedule of the course:				
Week	Topics of practices/labs			Lecturer
1	Description of the two tasks of the semester. (PPT). Folding experiments.			Dr. Katalin Máthé
2	Form study made of cardboard with creative folding.			Dr. Katalin Máthé
3	Cardboard form study with creative folding. Monogram sizing for the given object.			Dr. Katalin Máthé
4	Prototyping and design documentation.			Dr. Katalin Máthé
5	Submission, evaluation. Analysis and transcription of natural forms.			Dr. Katalin Máthé
6	Basic aspects of spatial form design; experimentation with the possibilities of shaping forms.			Dr. Katalin Máthé
7	Organic-geometric shapes, shape transitions.			Dr. Katalin Máthé
8	Generate ideas. Form and function.			Dr. Katalin Máthé
9	Sequences of shapes, equilibrium ratio order - scale composition, function.			Dr. Katalin Máthé
10	Material-form-function-mass model.			Dr. Katalin Máthé
11	Modelling, technical documentation.			Dr. Katalin Máthé
12	Rector's Break			(-)
13	Prototype and documentation.			Dr. Katalin Máthé
14	Submissions, semester evaluation.			Dr. Katalin Máthé
Mid-term requirements:				
<i>Attendance at lectures and practices/labs</i> Participation in exercises is compulsory; absences are according to the TVSZ (the number of absences may not exceed 30% of the total number of hours in the semester).				
<i>Seminary tests, reports, essays, etc.</i> Week 5 The first task is to submit and evaluate prototypes and documentation. Week 13 The second task is to submit a mock-up/prototype, design documentation and a poster. Week 14 Replacements. Evaluation.				

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<i>The method of obtaining a signature and examination conditions:</i> Completion of the semester is based on the timely, quantitative and qualitative completion of the required tasks. Assignments submitted after the deadline may be submitted no later than the following week of classes, subject to a late fee. If a student does not have an accepted assignment in the subject by the due date, they will receive a signature refusal mark, which he/she may correct within the time limit specified in the Study and Examination Regulations.
<i>Professional competencies:</i> – Knowledge of basic design principles and methods, major manufacturing processes and operational procedures. – Knowledge of the main raw materials used in product design, their production and conditions of use. – Knowledge of basic construction designs and their sizing principles. – Knowledge of the basic rules and technological limits of product shaping, content and form matching. – Ability to design simple products in terms of form and construction, taking into account technological constraints, expected costs and environmental impact. – Ability to translate solutions developed in nature into technical practice. – He/she will endeavour to pursue self-training in industrial product and design engineering on an ongoing basis and in line with his/her professional goals.
<i>Literature:</i> 1. https://elearning.uni-obuda.hu/ PPT-s and aids prepared by the instructor 2. J. Robert Rossman, Mathew D. Duerden: Designing Experiences. Columbia University Press, New York, United States, 2019. ISBN13 9780231191685 3. Paul Jackson: Folding Techniques for Designers: From Sheet to Form. 2022. Quercus Publishing. ISBN10 1856697215, ISBN13 9781856697217 4. Paul Jackson: Cut and Fold Techniques for Pop-Up Designs. Laurence King Publishers, 2014. ISBN13 (EAN): 9781780673271 5. Kapsali Veronika: Thames &Hudson, London, 2021. Biomimetics for Designers. ISBN13 (EAN): 9780500296387 6. MÁTHÉ, K. 2021, 'Lifelong kindergarten: the past and present of Friedrich Fröbel's teaching philosophy in cultivating creativity', 8th International Joint Conference on Environmental and Light Industry Technologies, Óbudai Egyetem Budapest, 2021. November 18- 19. 154-161.old. 7. MÁTHÉ, K. 2019, 'The Coming of Heaven on Earth and the Bauhaus', Darvas, Gy. & Katona, V. szerk. Symmetry: Culture and Science, 30:4, 339-358. old.