



Dofinansowane przez Unię Europejską



COURSE SPECIFICATION

Course code	full-time programme: M#2-S1-ME-702A					
Course code	part-time programme:					
Course title in Polish	Design w przemyśle					
Course title in English	Industrial Design: Aesthetic and Functional					
	Considerations					
Valid from (academic year)	2024/2025					

GENERAL INFORMATION

Programme of study	MECHANICAL ENGINEERING
Level of qualification	first-cycle
Type of education	academic
Mode of study	full-time programme
Specialism	all
Department responsible	Department of Metrology and Modern Manufacturing
Course leader	dr hab. inż. Marcin Graba, prof. PŚk
Approved by	dr hab. Jakub Takosoglu, prof. PŚk, Dean of the Faculty of Mechatronics and Mechanical Engineering

COURSE OVERVIEW

Course type		programme-specific			
Course status		elective			
Language of instruction		English			
Semester of	full-time programme	Semester VII			
delivery	part-time programme				
Pre-requisites					
Examination required (YES/NO)		NO			
ECTS value		1			

Mode of instruction		lecture	class	laboratory	project	seminar
	full-time	15				
No. of hours	programme	15				
per semester	part-time					
	programme					

LEARNING OUTCOMES

Category of outcome	Outcome code	Course learning outcomes	Corresponding programme outcome code
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Fundusze Europejskie dla Rozwoju Społecznego



Rzeczpospolita Polska

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Knowledge	W01	He / She has knowledge and understands the significance of humanities content in the fields of technology and economic activities. He also demonstrates an understanding of the impact of civilizational and cultural development processes on the present and can predict the influence of civilizational and cultural changes on the need for changes in industrial design.	MiBM1_W05
	W02	He / She is familiar with and studies publications and materials related to issues in industrial design, unique design, and prototyping. He also follows and tracks the achievements of "design schools" and their traditions in the development of industrial design.	MiBM1_W04
Skills	U01	He / She is able to prepare and deliver a multimedia presentation dedicated to the results of an engineering task. Additionally, he can consciously use project and construction workshop tools for graphic communication and presentation.	MiBM1_U02
	U02	He / She can obtain information from literature, databases, and other sources in various languages. He is capable of integrating the acquired information, conducting analysis and interpretation, drawing conclusions, formulating and justifying opinions, as well as selecting the appropriate communication technique and implementation method for the designed industrial pattern.	MiBM1_U21
Competence	K01	He / She is aware of the necessity of collecting and analyzing information and can interpret it consciously to enhance entrepreneurial thinking while understanding societal needs. Moreover, he is capable of critically evaluating both newly acquired and previously held information.	MiBM1_K01

COURSE CONTENT

Type of instruction lecture	Topics covered
lecture	Introduction – The Relationship Between Art and Industry: The Industrial Revolution. Pure and Applied Art. Development of the Humanistic Concept of Art. Humanistic and Abstract Art. The Essence of Form in Art. The Essence of Form in Art and Industry. Formulation of Industrial Design Principles According to Herbert Read. Standardization and Industrial Design. Formal Values in Machine Art. A Proposal for Resolving the Relationship Between Art and Industry. General Issues Related to the Form of Industrial Designs: Material, Processing, Purpose, and Function. Issues Related to the Substance of Form (Inorganic Materials – Glass, Ceramics, Metallic Materials; Organic Materials – Wood, Textile Materials, Leather Materials) – Material, Processing, Functionality. Construction and Design Aspects of Industrial Designs: General Issues Related to the Form of Industrial Designs – Construction. General Issues Related to the Form of Industrial Designs – Design – Product Synthesis Scheme, Product Life Cycle. Intellectual Property and Industrial Design:
	Patents, Utility Models, Industrial Designs. UPRP Databases. Protection of Intellectual Property in Industrial Design. Additional Information on Former and Present









Organizations Consolidating Activities in Art and Industry. Selected Aspects of Industrial Design: Issues Concerning Specific Elements of Industrial Design.

ASSESSMENT METHODS

Outcome	Methods of assessment (Mark with an X where applicable)							
code	Oral examination	Written examination	Test	Project	Report	Other		
W01			Х					
W02			Х					
U01			Х					
U02						Х		
K01			Х			Х		

ASSESSMENT TYPE AND CRITERIA

Mode of instructionAssessment type		Assessment criteria				
lecture	non-examination assessment	Obtaining at least 50% of the points on the test.				

OVERALL STUDENT WORKLOAD

ECTS weighting												
			Student workload									Unit
No.	Activity type		fu	II-tin	ne			ра	rt-tir	ne		
			pro	gran	nme		programme					
1	Scheduled contact hours	L	С	Lb	Ρ	S	L	С	Lb	Ρ	S	h
••		15										
2.	Other contact hours (office hours, examination)	2										h
3.	Total number of contact hours		17									h
4.	Number of ECTS credits for contact hours	0,7									ECTS	
5.	Number of independent study hours	8								h		
6.	Number of ECTS credits for independent study hours		0,3								ECTS	
7.	Number of practical hours			0								h
8.	Number of ECTS credits for practical hours	0,0								ECTS		
9.	Total study time			25								h
10.	ECTS credits for the course 1 ECTS credit = 25-30 hours of study time						1					ECTS



Projekt "Dostosowanie kształcenia w Politechnice Świętokrzyskiej do potrzeb współczesnej gospodarki" nr FER5.01.05-IP.08-0234/23







READING LIST

- [1] Herbert Read, Art and Industry: The Principles of Industrial Design, Faber & Faber, 1934
- [2] Eskild Tjalve, A Short Course in Industrial Design, Newnes-Butterworths, 1979
- [3] Charlotte & Peter Fiell, Design of the 20th Century, Taschen, 1999
- [4] Don Norman, The Design of Everyday Things, Basic Books, 1988
- [5] Raymond Loewy, Industrial Design, Overlook Press, 1979
- [6] Carma Gorman (red.), The Industrial Design Reader, Allworth Press, 2003
- [7] Bill Moggridge, Designing Interactions, MIT Press, 2006
- [8] Susan Lambert, Form Follows Function: The Art of Industrial Design, Victoria & Albert Museum, 1993
- [9] Tom Kelley, The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm, Doubleday, 2001
- [10] Bruno Munari, Design as Art., Penguin Books, 1966
- [11] Jake Knapp, John Zeratsky, Braden Kowitz, Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days, Simon & Schuster, 2016.
- [12] Tom Kelley, David Kelley, Creative Confidence: Unleashing the Creative Potential Within Us All, William Collins, 2015.
- [13] Kenya Hara, Designing Design, Lars Müller Publishers, 2015.
- [14] Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation, Harper Business, 2019.
- [15] John Maeda, The Laws of Simplicity: Design, Technology, Business, Life, MIT Press, 2020.

