MODULE DESCRIPTION

Module code	**Z-ZIP2-611z**
Module name	**Elementy wzornictwa przemysłowego**
Module name in English	**Elements of Industrial Design**
Valid from academic year	**2016/2017**

A. MODULE PLACEMENT IN THE SYLLABUS

Field of study	**Management and Production Engineering**
Level of education	**2nd degree** *(1st degree / 2nd degree)*
Studies profile	**General** *(general / practical)*
Form and method of conducting classes	**Full-time** *(full-time / part-time)*
Specialisation	**Management Engineering**
Unit conducting the module	**The Department of Production Engineering**
Module co-ordinator	**dr inż. Zbigniew Lis**
Approved by:	

B. MODULE OVERVIEW

Type of subject/group of subjects	**Specialist subject** *(basic / major / specialist subject / conjoint / other HES)*
Module status	**Compulsory** *(compulsory / non-compulsory)*
Language of conducting classes	**English**
Module placement in the syllabus - semester	**3rd semester**
Subject realisation in the academic year	**Summer semester** *(winter / summer)*
Initial requirements	**No requirements** *(module codes / module names)*
Examination	**No** *(yes / no)*
Number of ECTS credit points	**2**

Method of conducting classes	Lecture	Classes	Laboratory	Project	Other
Per semester	**15**		**15**		

C. TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Module target	Skills in the preparation of the manufacturing process of a new product, taking into account the requirements of modern industrial design and visualization methods (rapid prototyping).

Effect symbol	Teaching results	Teaching methods *(l/c/lab/p/other)*	Reference to subject effects	Reference to effects of a field of study
W_01	He knows and understands the concepts and principles of the protection of industrial property and copyright in connection with the management of innovation processes in the use of resources of patent information.	l	K_W03	T2A_W10
W_02	He has expertise in the field of engineering design including elements of the life cycle of equipment and technical systems and issues and operating rules.	l	K_W06	T2A_W06
W_03	He has expertise in project management with a focus on contemporary methodologies and tools belonging competence engineer and manager.	l	K_W07	T2A_W02 T2A_W02
U_01	Can effectively obtain information from literature, databases, and other sources; can logically combine the information obtained, analyze, interpret and critically evaluate, draw conclusions and formulate fully justify opinions.	lab	K_U01	T2A_U01
U_02	He can prepare documentation or report on the results of the tasks of the project or research that follows the work of theoretical and analytical or experimental.	lab	K_U04	T2A_U03 T2A_U08
U_03	Able to prepare and present in Polish and English multimedia presentation and lead a discussion on the results of research or design task.	lab	K_U05	T2A_U04 T2A_U06 T2A_U07
K_01	Appreciates the importance of a continuous process of learning and acquiring specialized knowledge and skills as the basis for creative and entrepreneurial thinking.	l/lab	K_K01	T2A_K01 T2A_K06
K_02	He is aware of the importance and understand the relationships between the activities of engineering and business including the development of the region and understands the related responsibility for decisions.	l/lab	K_K02	T2A_K02 T2A_K04
K_03	Is aware of the role of a graduate of a technical university as a person who is a member of the team and the community that properly taking into account the principles of professional ethics resolves dilemmas related to the profession.	l/lab	K_K03	T2A_K03 T2A_K05 T2A_K07

Teaching contents:

1. Teaching contents as regards lectures

Lecture number	Teaching contents	Reference to teaching results for a module
1	The concept of design (design), its place in the contemporary material culture and business.	W_01
2	Industrial design, evolution in time, the characteristics of the main	W_01

	participants in the management process design.	
3	Copyright; a set of legal norms, the object of which is to ensure the protection of scientific, literary and artistic and design. Meaning symptoms; rights to property and personal to the author of the work created by him.	W_01
4	Stages and concepts of the design process of industrial design; design; Design assumptions; Challenges Design; Background of the Project; Feasibility Study; Product design specifications; New Product Development;	W_02
5	Stages and concepts of the design process of industrial design; Creative Industry; Conceptual design; Product design specifications; Conceptual design; Project Form; Project Engineering Technology; Innovation.	W_02
6	Multimedia presentation of Polish design; History of Polish design.	W_03 K_03
7	Color, light, image composition in the project design.	W_02
8	End of Lecture.	

2. Teaching contents as regards classes

Class number	Teaching contents	Reference to teaching results for a module

3. Teaching contents as regards laboratory classes

Laboratory class number	Teaching contents	Reference to teaching results for a module
1	Overview of the workshop design and industrial design in Poland and abroad; performance review report.	U_01
2	Overview of solutions in the field of product design: Appliances and Electronics, computer equipment, multimedia, computer peripherals, investment products, transport equipment, furniture, ceramics and glass, new media, accessories, lighting, sports equipment.	U_01
3	Working with color, choice of colors in the design of industrial design. Environment CAD – SolidWorks.	W_02
4	Overview of innovative objects of industrial design; an attempt to define new functionality.	W_02
5	The concept of your own design object consumer from the point of view of design.	W_02
6	Work on own project.	U_02
7	Preparation of documentation and presentation of own project.	U_03
8	End of laboratories.	

4. The characteristics of project assignments

The methods of assessing teaching results

Effect symbol	**Methods of assessing teaching results** *(assessment method, including skills – reference to a particular project, laboratory assignments, etc.)*
W_01	A passing test lecture.
W_02	A passing test lecture.

W_03	A passing test lecture.
U_01	Implementation of the project utility model selected object.
U_02	Project documentation utility of the selected object.
U_03	Multimedia presentation of the project utility selected object.
K_01	Messages given during lectures, discussions in the laboratories.
K_02	Messages given during lectures, discussions in the laboratories.
K_03	Messages given during lectures, discussions in the laboratories.

D. STUDENT'S INPUT

ECTS credit points		
	Type of student's activity	**Student's workload**
1	Participation in lectures	**15**
2	Participation in classes	
3	Participation in laboratories	**15**
4	Participation in tutorials (2-3 times per semester)	**5**
5	Participation in project classes	
6	Project tutorials	**10**
7	Participation in an examination	
8		
9	**Number of hours requiring a lecturer's assistance**	**45** *(sum)*
10	**Number of ECTS credit points which are allocated for assisted work** *(1 ECTS point=25-30 hours)*	**1.5**
11	Unassisted study of lecture subjects	**5**
12	Unassisted preparation for classes	
13	Unassisted preparation for tests	
14	Unassisted preparation for laboratories	
15	Preparing reports	
15	Preparing for a final laboratory test	
17	Preparing a project or documentation	**10**
18	Preparing for an examination	
19		
20	**Number of hours of a student's unassisted work**	**15** *(sum)*
21	**Number of ECTS credit points which a student receives for unassisted work** *(1 ECTS point=25-30 hours)*	**0.5**
22	**Total number of hours of a student's work**	**60**
23	**ECTS points per module** *1 ECTS point=25-30 hours*	**2**
24	**Work input connected with practical classes** *Total number of hours connected with practical classes*	**40**
25	**Number of ECTS credit points which a student receives for practical classes** (1 ECTS point=25-30 hours)	**1.5**

E. LITERATURE

Literature list	1. Cuffaro D., Zaksenberg I., *The Industrial Design Reference & Specification Book: Everything Industrial Designers Need to Know Every Day*, Sep 15, 2013. 2. Editors of Phaidon, *The Design Book*, Sep 16, 2013. 3. de Potestad M., Pascal P., *Vintage Industrial: Living with Machine Age Design*, Oct 14, 2014. 4. Eissen K., SteurSketching R. (12th printing), *Drawing Techniques for Product Designers*, Apr 1, 2009. 5. Castro-Cedeño M.H., *Introduction to SolidWorks*, second edition, Certified SolidWorks Associate, ver. Pdf. https://forum.solidworks.com/thread/73660. 6. Tran P., *Solidworks 2015 Part I Basic Tools*, Dec 12, 2014.

	7. Tran P., *Solidworks 2015 Part II - Advanced Techniques*, Dec 12, 2014. 8. Reyes A., *Beginner's Guide to SOLIDWORKS 2016 - Level I*, Dec 30, 2015. 9. Kurowski P., *Engineering Analysis with SOLIDWORKS Simulation 2015*, Feb 20, 2015. 10. Planchard D., *SOLIDWORKS 2016 Reference Guide*, Dec 16, 2015. 11. www.designworldonline.com - Design World. 12. www.nid.edu - National Institute of Design. 13. www.designaustria.at - Design Austria. 14. www.dutchdesignawards.nl - Dutch Design Awards. 15. www.designmuseum.fi - Museum of Art and Design. 16. www.businessdesigncentre.co.uk - Business design centre. 17. www2.uiah.fi - Finland – MUOVA. 18. www.designfortheworld.org - Design for the World. 19. www.centredesign-est.org - Centre Design Est-France. 20. www.edc.nl - European Design Centre. 21. www.svid.se - Svensk Industri Design. 22. www.cfsd.org.uk - The Centre for Sustainable Design (CfSD). 23. www.madmuseum.org - Museum of Art and Design. 24. www.bcd.es/en - Barcelona Centre de Disseny. 25. www.designmanagementeurope.com - Design Management Europ. 26. www.edcplc.com - European Design Centre.
Module website	