SYLLABUS

Basic data of the subject	
University	**University of Applied Sciences in Ferizaj**
Academic unit	**Faculty of Engineering and Informatics**
Program	**Industrial Engineering with Informatics**
Title of the subject	**Product Design and Development**
Level	**Bachelor**
Course Status	**Obligatory**
Year of studies	**III, Semester VI**
Number of hours per week	**3**
Value of Credits - ECTS	**4**
Time / location	
Course lecturer	
Contact details	
Course Description	*Product Design represents an integration of product management and development with technical and artistic product design skills. During this course students will be confronted with the analysis and evaluation of designs, design principles, as well as the application of the Solid Works program for the design and animation of product functions.*
Objectives of the course	*This module aims to provide new knowledge of the process of creating plastic products, product combination and its principles of establishment, modeling, and product form design.*
Expected learning outcomes	*Upon successful completion of this subject, students will be able to:* • *understand the methodology of product design and development.* • *meet the needs of users with the technology available to them.* • *apply the Solid Works program to product design.* • *understand the product economy as well as ergonomic, aesthetic and marketing requirements.*
Prerequisites	*The students must have knowledges on Engineering Graphics, CAD and Reverse engineering and 3D modeling course.*

Contribution to the student load (which must correspond with learning outcomes)			
Activity	**Hour**	**Day/Week**	**In total**
Lectures with numerical exercises	3	15	45
Internship			
Contacts with teacher / consultations	1	5	5
Field exercises			
Midterm, seminars and projects.	20		20
Homework	1	15	15

Self-learning time student (at the library or at home)	1	15	15
Final preparation for the exam			
Time spent on evaluation (tests, quiz and final exam)			
Projects and presentations.	1	3	3
Total			**103**

Teaching methodology	*Lectures and exercises combined with tutorials, computer lab work and classroom exercises*
Assessment methods	*The student is assessed as following:* *1. Project 80%: individual assessment* *2. Final Exam 20%: individual assessment* ***Additional clarification:*** *If the student in each activity above reaches the maximum points, then he will be evaluated with 100 points.* *Project Task (80%): it is an activity in which students apply the acquired knowledge in a concrete project. It is carried out by one student (it also can be a group of 2 or 3 students) who is obliged to carry out the activity, document it, and present it to the subject professor.* *Evaluation by Final Exam (50%), the student will undergo the exam which is held after the end of the lectures of the course, and is organized in the exam deadlines, determined by the University senate.* *The final exam contains:* • *Theoretical questions from the course materials* ***Rating:*** *91-100 points – graded 10 (ten)* *81-90 points – graded 9 (nine)* *71-80 points – grade 8 (eight)* *61-70 points – grade 7 (seven)* *51-60 points – grade 6 (six)* *0-50 points – The student repeats the exam.*
The ratio of theory and practice	60% theory with exercises and 40% practical work.
Literature	
Basic Literature	*1. Handouts provided by the lecturer*
Additional Literature	*1. Product Design and Development by Karl T. Ulrich and Steven D. Eppinger, 5th Edition 2011* *2. Integrated product and process design and development, E.M. Magrab, B. Ration, CRC Press 1997* *3. Product Design. Techniques in reverse engineering and*

	new product development, Prentice Hall, 2001
Designed learning plan	
Week:	**Lectures and exercises to be held**
Week one	*Product design cycle*
Week two	*Product design methodology*
Week three	*Variety of products and the principles of their formation*
Week four	*Identifying customer needs*
Week five	*Market research*
Week six	*Product model modeling and design*
Week seven	*Reflection/consultations*
Week eight	*Industrial design and the human factor*
Week nine	*Cost analysis*
Week ten	*Product management*
Week eleven	*Software application in design*
Week twelve	*Solid Works I*
Week thirteen	*Solid Works II*
Week fourteen	*Presentations*
Week fifteen	*Presentations*
Academic policies and rules of conduct	
Regular attendance of lectures and exercises is necessary, as well as active participation with discussion and solution of tasks. Not impeding the progress required for learning using mobile phones turned off or in silent mode.	