

Study program / course: Mechanical Engineering				
Type and level of study: Master academic studies				
Course: Industrial Design				
Lecturers: Ivanović T. Lozica				
Status of course: Obligatory for module M₂, I semester				
Number of ECTS: 6				
Precondition:				
The objective of course The basic aim of the course is achieving the necessary skills and knowledge related to design, and also developing students' creative skills. Students learn the methodology and the principles of product design from the aspect of functionality, aesthetic demands, reliability and safety, quality, productive characteristics, economic justification.				
The outcome of course A student who passes this course gains the ability of creative harmonizing the factors from ideas to new solutions within product development. The student will be skilled to work on product designing using the current computer tools.				
Syllabus Theoretical study Methodology of design. The essence, the aims, the concept. Theory, history and definition of industrial design. The place of industrial design in the process of constructing. Form and contents. Shapes, proportions and similarities in nature and their influence on the development of industrial design. Material and the process of production, ecological aspect. Color, ornament and other artistic elements. Function, aesthetic factor, ergonomy, anthropometry. The influence of the production method and technology on design. The role and the aims of design in product development. The evaluation of design. Forming the following documentation. Practical Studies: Exercising of basic aesthetic elements and principles in industrial design. Training and working in software package CATIA. Principles of shape modeling on a computer. Product designing with the use of concrete measures for product improvement.				
Recommended reading 1. Kuzmanović S.: Construction, shaping and design, II part, Faculty of technical science in Novi Sad, 2005. 2. Ognjanović M.: Methodology of machine construction, Faculty of mechanical engineering, Belgrade, 1990. 3. Devedžić G.: Software solutions CAD/CAM systems, Faculty of mechanical engineering Kragujevac, 2004.				
The number of hours of active teaching:				Other classes: 1
Theory: 2	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0	
Methods of teaching The course consists of lectures and exercises. The exercises are conducted as auditory and practical on computer. The exam is written or oral. During the semester, through colloquiums and seminar papers, students' work is regularly checked. Successfully passed colloquiums are counted as the written part of the exam. The oral exam is compulsory with seminar papers.				
Evaluation of knowledge				
Pre-final exam obligations	points	Final exam		points
Activities during the classes:	5	written or oral		30
Practical classes:	10			
Colloquiums(s) :	45			
Seminar(s) :	10			