

Study program :Mechanical engineering			
Type and level of studies: Master Academic Studies			
Course unit: Computer Aided Design			
Teacher in charge : PhD Nenad Marjanović			
Language of instruction: English			
ECTS:6			
Prerequisites: Fundamentals of Machine Design, Engineering Tools I			
Semester: <i>winter</i>			
Course unit objective The aim of this course is to introduce students to advanced possibilities of computers and software application in machine system design, to qualify students for modeling real machine parts and assemblies, and generating design documentation in chosen CAD software. The aim is, also, to qualify students to watch for and accept news and improvements in this area.			
Learning outcomes of Course unit Students will upon completing the course have the following competencies: <ul style="list-style-type: none"> • Knowledge of basic and advanced capabilities of using CAD software in various stages of product development; • Be capable of individually modeling parts, assemblies, complex surfaces, installations and develop technical documentation of real machine systems using a computer; • Knowledge of and use of software tools for team work and control of construction documentation; • Management of model appearance; • Connecting models to various software. 			
Course unit contents <i>Theoretical classes</i> Use of computers and software in a product's concept phase. Modeling parts, assemblies and developing documentation on CAD software. Advanced possibilities of modeling real machine systems. Managing model design. Use of software for team work and control of construction documentation. Connecting models in various software. <i>Practical classes</i> Completing tasks in the fields of: Modeling parts (sketches, constraints, features, combining features, parametric modeling), modeling assemblies, developing drawings and other documentation. Using tools for team work and managing documentation. <i>Laboratory work</i> Modeling and following a simple product through its lifecycle using suggested computer tools. Students will also be qualified for conducting basic research in the subject field of study.			
Literature 1. Sham Tickoo, Autodesk Inventor for Designer, CADCIM Technologies, 2013. 2. Waguespack K., Mastering Autodesk Inventor, Willey Publishing, Indianapolis, 2009			
Number of active teaching hours			
Lectures: 3	Practice: 1.4	Other forms of classes: 0.6	Independent work: 0
			Other classes: 1
Teaching methods Classes are held as theoretical classes, practical classes and individual work of students. Theoretical classes provide basic information, practical classes give students applied knowledge and skills for using specific tools in given areas. Students individually complete problems which include and integrate knowledge of specific tools.			
Examination methods (maximum 100 points)			
Exam prerequisites	No. of points:	Final exam	No. of points:
Student's activity during lectures	10	oral examination	
practical classes/tests	30	written examination	<i>30</i>
Seminars/homework	30	
Project			
Other			
Grading system			
Grade	No. of points	Description	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	50	Failing	