

Computer Aided Design AutoCAD - opis przedmiotu

Informacje ogólne	
Nazwa przedmiotu	Computer Aided Design AutoCAD
Kod przedmiotu	06.1-WM-ER-MiBM-05_18
Wydział	Wydział Mechaniczny
Kierunek	WM - oferta ERASMUS
Profil	-
Rodzaj studiów	Program Erasmus
Semestr rozpoczęcia	semestr zimowy 2023/2024

Informacje o przedmiocie	
Semestr	1
Liczba punktów ECTS do zdobycia	2
Typ przedmiotu	obowiązkowy
Język nauczania	angielski
Sylabus opracował	<ul style="list-style-type: none">dr inż. Joanna Cyganiuk

Formy zajęć					
Forma zajęć	Liczba godzin w semestrze (stacjonarne)	Liczba godzin w tygodniu (stacjonarne)	Liczba godzin w semestrze (niestacjonarne)	Liczba godzin w tygodniu (niestacjonarne)	Forma zaliczenia
Laboratorium	30	2	-	-	Zaliczenie na ocenę

Cel przedmiotu

The aim of the course is to familiarize students with creating of three-dimensional models and prototypes of technological tools and appliances, with calculation of prototypes, with the analysis of their producibility (in terms of work), with possibilities of design of virtual model and with giving them right features as well as with possibilities of automatic technical documentation generation.

Wymagania wstępne

Mechanics and Strength of Materials, Fundamentals of Machine Design, Technical mechanics, Fundamentals of Engineering Design

Zakres tematyczny

The content of the laboratory:

Introduction to computer aided design. Tools and functions of modules. Conception project. Work with digital model. Creating three-dimensional models of objects (virtual equivalents). Three-dimensional structure of tools prototypes. Three-dimensional structure of appliances prototypes. Work with model (material, features, calculations). Automatic generation of simple three-dimensional models. Visual reflection of the virtual prototype (rendering). Generation of technical documentation. Prototype analysis. Model producibility - structural changes. Three-dimensional structure of tools prototypes. Three-dimensional structure of appliances prototypes.

Metody kształcenia

Laboratories are given with the use of computer software – methods: problem tasks, solution analysis. Individual and group job during the realization of laboratory exercises.

Efekty uczenia się i metody weryfikacji osiągnięcia efektów uczenia się

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
The student is able to use modern computer techniques in solving engineering tasks in the field of machine design.		<ul style="list-style-type: none">wykonanie sprawozdań laboratoryjnych	<ul style="list-style-type: none">Laboratorium
The student can make a critical analysis of virtual prototypes of technological appliances and tools.		<ul style="list-style-type: none">wykonanie sprawozdań laboratoryjnych	<ul style="list-style-type: none">Laboratorium
The student is able to identify and make specification of simple practical engineering tasks in the field of three-dimensional virtual design and prototyping of technological machines and appliances.		<ul style="list-style-type: none">wykonanie sprawozdań laboratoryjnych	<ul style="list-style-type: none">Laboratorium
The student has knowledge in the area of design and computer aided design of virtual prototypes of parts of appliances and machines with taking into consideration their manufacturing technology.		<ul style="list-style-type: none">wykonanie sprawozdań laboratoryjnych	<ul style="list-style-type: none">Laboratorium
The student is able to correctly identify priorities for implementation of actions determined by others or by him.		<ul style="list-style-type: none">wykonanie sprawozdań laboratoryjnych	<ul style="list-style-type: none">Laboratorium

Opis efektu	Symbole efektów	Metody weryfikacji	Forma zajęć
The student can create design of a virtual prototype of a simple appliance, typical for process of technological design with the use of appropriate computer software.		<ul style="list-style-type: none"> wykonanie sprawozdań laboratoryjnych 	<ul style="list-style-type: none"> Laboratorium

Warunki zaliczenia

To get a credit the student has to pass the laboratory.

Literatura podstawowa

1. Hamad M., AutoCAD 2020 Beginning and Intermediate, Mercury Learning and Information, USA 2019,
2. Shumaker T., Madsen D.A. , MadsenD.P., Laurich J., AutoCAD and Its Applications Comprehensive 2020, Goodheart-Wilcox, USA, 2019,
3. Shumaker T., Madsen D.A. , MadsenD.P., AutoCAD and Its Applications Basic 2020,Goodheart-Wilcox, USA, 2019,
4. Moss E., Autodesk AutoCAD 2023 Fundamentals, SDC Publications, USA 2022,
5. Shih R.H, AutoCAD 2018 Tutorial Second Level 3D Modeling, SDC Publications, USA 2017,
6. Shih R.H, Tools for Design Using AutoCAD 2018 and Autodesk Inventor 2018, SDC Publications, USA 2017,
7. Hamad M., AutoCAD 2019 3D Modeling, Mercury Learning and Information, USA 2018,

Literatura uzupełniająca

- 1.Hamad M., AutoCAD 2018 3D Modeling, Mercury Learning and Information, USA 2018,

Uwagi

The laboratory in English

Zmodyfikowane przez dr Katarzyna Skrzypek (ostatnia modyfikacja: 31-05-2023 14:15)

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