

Lecturer

Name: Mariana Ilie

Background: PHD

Specialization: Computer Assisted Technical Graphics

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Course Description

Title: Timisoara aCADemy!

Fields of activity: CAD (proEngineer, ANSYS), Machine Parts, Reliability in automotive, Tribology

Examination type: Practical Work

Number of ECTS credits issued: 0

Learning Goals and Objective: The objective of this course is to present the main concepts of 3D design in proEngineer – Creo 2.0..

The expected result is for the students to get familiar with the Creo 2.0 program - to create solids, surfaces and assemblies, to use the modules of the program to simulate working assemblies.

Syllabus

Name of activity	The capabilities of Creo 2.0. The main interface.
Number of working hours	1 hour
Type of activity	Lecture
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	This course is a comprehensive introduction in the Creo 2 program, presents the modules of the program.
Bibliography	-
Expected effect	Understanding the main concepts of 3D program and the modules for Creo 2.

Name of activity	Creating parts using basic features – extrude, revolve
Number of working hours	5 hours
Type of activity	Laboratory Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	Participants will create parts using Extrude feature – solid, remove material, thicken sketch. Participants will create parts using Revolve feature – solid, remove material, thicken sketch. Participants will create parts using combination of features extrude/revolve– solid, remove material, thicken sketch. The sketch capability is presented.
Bibliography	-
Expected effect	Creating complex parts using Extrude and Revolve features.

Name of activity	Creating parts using engineering features – holes, patterns, chamfer, round, rib, shell, draft.
Number of working hours	4 hours
Type of activity	Laboratory Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	Participants will use the engineering features to create parts. Participants will create auxiliary planes, axes.
Bibliography	-
Expected effect	The students will acquire the basic knowledge to use engineering features in create complex parts, to create auxiliary planes, axes.

Name of activity	Creating parts using complex features – sweep, blend.
Number of working hours	2 hours
Type of activity	Laboratory Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	Participants will create parts using Sweep feature – solid, remove material, thicken sketch. Participants will create parts using Blend feature – solid, remove material, thicken sketch.
Bibliography	-
Expected effect	The students can create complex parts – with sweep, blend, extrude, revolve, engineering features.

Name of activity	Creating assemblies.
Number of working hours	5 hours
Type of activity	Laboratory Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	Participants will create assemblies in assembly module, we create components directly in the assembly. Participants will use mechanism module to simulate the movement of assembly components.
Bibliography	-
Expected effect	The students will learn to work with components in assembly in different ways.

Name of activity	Creating drawings.
Number of working hours	1 hours
Type of activity	Laboratory Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	Participants will create drawings for parts and for assemblies.
Bibliography	-
Expected effect	The students will learn to work with drawing module.

Name of activity	Exam.
Number of working hours	2 hours
Type of activity	Practical Work
Lecturer	Dr. Ing. Prof. Mariana Ilie
Short summary of content	The students create parts, assemblies – using the abilities that they have acquired during this course.
Bibliography	-
Expected effect	The students will make their own assembly using the learned aspects of CAD program.

Pre-materials

Name	CAD in proEngineer – Creo 2.0
Topic/field	3D Design/ Mechanical Enigneering

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