

Computer Aided Design

Type of course	Lecture, exercises
Number of credits	6 ECTS
Number of hours	to be determined
Semester	Autumn or Spring
Name of lecturer	dr inž. Marek Macko
Language of instruction	English
Assessment methods	Exam, presentation

Prerequisites

Using basic geometrical rules in practice and computer skills.

Goal of the course

Introduction into computer aided systems in design process based on machine construction. Aspects of using CAD/CAM/CAE/PDM systems and skills in how to use chosen CAD application. Improvement of technique of graphical notation in computer systems.

Course contents

Methodology of design based on CAD, Current CAS systems – review and their structure; Geometric analysis of design; Types of geometrical models; Introduction into simulation; Computer simulation models; Parameterization of construction; Implementation of integrated CAD systems; Rapid prototyping and printing 3D; FEM in machine construction; Basis of CAD systems based on AutoCAD, Mechanical Desktop, SolidWorks, CosmosWorks, CosmosMotion applications; Methods of modeling surfaces, format of design notation Exchange of data between CAD systems – IGES, STEP standards.