

Course description

1 General information

Course name	CAD Design
Course code	M8-CD
Level of study (B.Sc, M.Sc., Ph.D.)	B.Sc.
ECTS	5
Course manager	Tomasz Kuczek, PhD
Course length	One (1) semester
Coordinator for international programs	erasmus@mech.pk.edu.pl

2 Prerequisites

- Fundamentals of 3D modelling

2 Program

Type		Classes	Labs	Computer labs	Project	Seminar
Hours	0	0	0	60	0	0

3 Contents

Computer labs		
No.		Hours
1	SolidWorks: Working with sketches – sketching methods, sketch definitions: relations, dimensions.	4
2	SolidWorks: Creating 3D parts with the use of base features.	4
3	SolidWorks: Creating bended sheet metal parts using sheet metal features.	4
4	SolidWorks: Creating assembly models including 3D parts, mirrors and patterns.	4
5	SolidWorks: Individual task.	14
6	CATIA V5: Sketcher, sketch definitions: relations, dimensioning.	4
7	CATIA V5: Part Design: 3D modeling of parts.	4
8	CATIA V5: Assembly Design: Preparation of assembles.	4
9	CATIA V5: Sheet Metal Design: Designing of sheet metal parts.	4
10	CATIA V5: Individual task.	14

3 Learning Outcomes (skills and knowledge):

- Student possess the ability to create 2D sketches.
- Student possess the ability to create 3D parts with the use available features.
- Student possess the ability to create complex assemblies.
- Student possess the ability to create sheet metal parts.
- Student possess the ability to create noncomplex individual project.

4 Assessment policy (examination):

- Evaluation of individual task – student is able to create and recreate a simple 3D structure using tools and options available in CAD software

5 Literature

1. A. Reyes, Beginner's Guide to SOLIDWORKS 2024 - Level I Parts, Assemblies, Drawings, SOLIDWORKS Visualize and SimulationXpress, SDC publications
2. J. Willis, S. Dogra, SOLIDWORKS 2024 A Power Guide For Beginners and Intermediate Users, 11th Edition, CADArtifex
3. Richard Cozzens, Advanced CATIA V5 Workbook, 1th Edition, SDC Publishing