



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

CAD

### Course

Field of study

Mechatronics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

1/2

Profile of study

general academic

Course offered in

polish, english

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

15

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

mgr inż. Adam Patalas

Institute of Mechanical Technology

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tel.: +48-61-665-25-52

Faculty of Mechanical Engineering

Piotrowo 3, 60-965 Poznań

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### Prerequisites

Knowledge of the basic principles of technical drawing.

Basic knowledge of CAD software. Ability to share your skills with people in the group, understanding the need for continuous learning and complementing knowledge.

### Course objective

Improving the ability of students to make drawings and models of mechanical and electromechanical elements for design purposes with the use of modern CAD softwares.



## Course-related learning outcomes

### Knowledge

Knowledge of the principles of complex drawing of mechanical elements (projections, sections, details, complex technological diagrams, axonometry, unfolding). Good knowledge of selected CAD softwares, including the preparation of complex printouts.

### Skills

The student is able to draw a complex drawing of mechanical elements in the CAD program in the form of projections and sections, and in the form of a technological / assembly diagram and axonometry. The student is able to prepare printouts of drawings from the CAD program in electronic form. The student is able to make a 3D drawing.

### Social competences

Awareness of the need to constantly acquire and expand knowledge in order to competently perform the profession of engineer.

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Verification on the basis of partial assessments of exercise, drawings and models.

## Programme content

Software (Solidworks or Autodesk Inventor)

Sketch Creation, Part Creation, Assembly, Part Drawing Creation, Assembly Drawing Creation, Standard Part Generator, Surface Part Modeling, Sheet Metal Generator, Frame Generator, CAM

## Teaching methods

A multimedia presentation and practical tasks performed by students (drawing and modeling in CAD software).

## Bibliography

### Basic

Rysunek techniczny w mechanice i budowie maszyn, Paweł Romanowicz, PWN 2018

### Additional

Polish standards for technical drawing.

Training materials provided by the authors of CAD software.



### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	20	1,0

<sup>1</sup> delete or add other activities as appropriate