



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

CAD

### Course

Field of study

Production Engineering and Management

Area of study (specialization)

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Level of study

First-cycle studies

Form of study

part-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

16

Tutorials

Projects/seminars

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

Radosław Wichniarek

Responsible for the course/lecturer:

email: [radoslaw.wichniarek@put.poznan.pl](mailto:radoslaw.wichniarek@put.poznan.pl)

tel. 61 665 27 08

Faculty of Mechanical Engineering

ul. Piotrowo 3, 60-965 Poznań

### Prerequisites

Basics knowledge in scope of technical drawing and engineering graphics. Good skill to logical thinking, using of information obtained from engineering documentation and computer. Student understand of the need to learn and acquire new knowledge.

### Course objective

Students become familiar with computer-aided design.

### Course-related learning outcomes

Knowledge

1. The student knows the main forms of writing engineering graphic, methods of graphical mapping, sectional drawing, dimensioning.



2. The student knows functions of software for 2D modeling, can enumerate the geometric elements used in the software.

3. The student knows the tools of precise drawing in CAD systems.

#### Skills

1. The student is able to use typical CAD 2D system graphical interface.

2. The student is able to use command line to run typical functions used in computer aided drafting.

3. The student is able to export/import CAD 2D data in different formats.

#### Social competences

1. The student is able to independently develop his knowledge and skills.

2. The student is aware of the role of computerization in the engineering activities.

3. The student is open to the implementation of modern information technologies in science and technology.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Partial marks:

Based on the assessment of the current progress of the tasks in laboratory.

Summary mark:

On the basis of a knowledge checking test (pass at the computer workstation).

#### Programme content

Laboratory:

1. Overview of computer systems for design process supporting.

2. Discussion of geometric elements used in computer systems.

3. Presentation and discussion of graphic software, input and output devices.

4. Modeling in computer graphics, issuing and executing commands, precise drawing, auxiliary tools.

5. Practical cognition with the basic methods of creating a drawing, modeling, visualization and archiving.

6. Creation of technical documentation, drawing blocks, components libraries and their applications.

#### Teaching methods



Laboratory part: presentation by the teacher of practical issues related to computer aided design and independent work of students at computers with supervision of the teacher.

### Bibliography

Basic

1. Pikoń A., AutoCAD 2020 PL : pierwsze kroki, Gliwice : Wydawnictwo Helion.
2. Dobrzański T., Rysunek techniczny maszynowy, Wydawnictwo WNT : Wydawnictwo Naukowe PWN, 2019.

Additional

1. Technologia budowy maszyn, Feld M., PWN, Warszawa, 1993.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	30	1,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	45	1,5

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