



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Grafika inżynierska (AutoCad podstawowy) (Engineering graphics - elective project ( AutoCad basic course))

### Course

Field of study

Technologia chemiczna (Chemical Technology)

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

I/2

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

15

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

Marek Ochowiak Eng, PhD, DSc

Responsible for the course/lecturer:

### Prerequisites

As preliminary requirements the student should have an elementary knowledge of the basics of mathematics and engineering graphics. He should also have the ability to make and read technical documentation.

### Course objective

Practical knowledge of computer aided design. In addition, the student acquires the ability to perform drawings using basic functions in the AutoCad program. AutoCad 2D course – basic level.

### Course-related learning outcomes

Knowledge

1. Has knowledge of the principles of technical drawing and computer aided 2D design. K\_W15
2. Has knowledge of basic drawings in AutoCad. K\_W15



### Skills

1. Use the understanding of the indicated sources of knowledge and acquire knowledge from other literature sources, including electronic. K\_U1
2. Is able to use the learned principles and appropriate computer-aided design tools to solve typical engineering graphics tasks. K\_U7

### Social competences

1. Understands the need for further training and raising his professional competences, he is aware that the acquired knowledge and skills will allow him to compete in the labor market. K\_K1

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Test, Assessment of class activity.

### Programme content

The following topics are covered throughout the classes:

- AutoCad screen: drawing area, command window, top menu, tool windows,
- communication with the program (commands, tool windows, top menu, keyboard commands),
- point pointing (cursor, keyboard, characteristic points),
- entering coordinates,
- fixed location modes - the object,
- drawings and commands: line, circle, arc, move, copy, offset, array, rectangle, chamfer, fillet, rotation,
- cut, extend, mirror, hatch-edit, zoom, smash, undo.
- types of lines, loading,
- color of objects,
- width of objects,
- changing the features of objects (color, line type, layer, line width),
- entering descriptions,
- line types,
- dimensioning drawings
- execution using the above functions of basic drawings in the AutoCad program.

### Teaching methods



Multimedia presentation, pdf materials.

## Bibliography

### Basic

1. Kłosowski P., Ćwiczenia w kreśleniu rysunków w systemie AutoCAD 2010 PL, 2011 PL, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2010.
2. Pikoń A., AutoCAD 2020 PL : pierwsze kroki, Helion, Gliwice 2020.

### Additional

1. Agaciński P., Grafika Inżynierska, Wydawnictwo Politechniki Poznańskiej, 2014.
2. Dobrzański T., Rysunek techniczny maszynowy, WNT Warszawa 2019.
3. Babiuch M., AutoCAD 2012 i 2012 PL : superprojekt od ręki? z autoCAD-em 2012!, Helion, Gliwice, 2016.

## Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2
Classes requiring direct contact with the teacher	25	1
Student's own work (literature studies, preparation for tutorials, preparation for test, drawings preparation) <sup>1</sup>	25	1

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