UNIWERSYTET GDAŃSKI

Course title Podstawy AutoCAD-a/Basics of AutoCAD	**ECTS code** 13.3.0759

Name of unit administrating study
Faculty of Chemistry

Studies

Field of study	Type	Form	
Chemical Business	Bachelor / Engineer	Full-time studies	

Teaching staff
Prof. dr hab. inż. Adriana Zaleska-Medynska

Forms of classes, the realization and number of hours	**ECTS credits** 2
A. Forms of classes, in accordance with the UG Rector's regulations laboratory classes	classes - 45 h tutorial classes – 5 h student's own work – 10 h Total: 60 h - 2 ECTS
B. The realization of activities in-class learning	
C. Number of hours 45 h laboratory classes	

The academic cycle
Third year, summer semester

Type of course obligatory	**Language of instruction** Polish
Teaching methods Classic problem method • Computer exercises • Project	**Form and method of assessment and basic criteria for evaluation or examination requirements** **A. Final evaluation, in accordance with the UG study regulations** course completion (with a grade) **B. Assessment methods** Evaluation of exercises performed during the course Evaluation of the implementation of the final project **C. The basic criteria for evaluation** or exam requirements

Required courses and introductory requirements
Information technology, Technical drawing, Chemical apparatus
Basic knowledge of English, computer skills, basic knowledge of the principles of technical drawing, knowledge of basic devices and apparatus used in the chemical industry

Aims of education

- to familiarize students with issues related to the use of engineering software (AutoCAD) in design work covering the broadly defined chemical industry
- to develop skills in solving problems related to project work, including group work

Course contents

Familiarization with the work environment in AutoCAD, discussion of individual interface elements, adaptation of the work screen to the needs of the project task, coordinate systems, basic commands and function keys
Drawing creation: basic tools for drawing two-dimensional objects, working with templates, determining the area, units (e.g. meters, millimeters), scale and other properties of the drawing
Working with layers: creating new and modifying existing layers
Drawing elements with complex shapes
Editing a drawing: copying, moving, deleting, rotating, cropping objects, chamfering and rounding corners, creating a pattern of objects, etc.
Drawing description: a reminder of the basic rules for dimensioning and description of a technical drawing and the application of these rules during working with AutoCAD
Block creation, block operations
Preparation of the drawing for printing: work in model space and worksheet, creation of a drawing table, selection of the printing

device, selection of printing parameters
Cooperation of many people on one project: unification of drawing rules, copying, import and export of individual objects and entire drawings
3D modeling
Creating complex 3D objects
Creating technical drawings based on 3D models

Bibliography of literature

A. Literature required to pass the course

Pikoń A., AutoCAD 2014 PL. Pierwsze kroki, Wydawnictwo Helion, Gliwice 2014
Kłosowski P. Ćwiczenia w kreśleniu rysunków w systemie AutoCAD 2010PL 2011PL, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2011

B. Extracurricular readings

Warych J., Aparatura chemiczna i procesowa, Oficyna wydawnicza Politechniki Warszawskiej, Warszawa 1996
Dobrzański T. Rysunek techniczny maszynowy, Wydawnictwa Naukowo-Techniczne, Warszawa 2015

Knowledge

Student:
1. knows the principles of technical drawing and the way of preparing technical documentation using AutoCAD software
2. has a wide knowledge about the possibility of using engineering software (AutoCAD) in the design and modeling of apparatus and devices related to the chemical industry

Skills

Student:
1. uses engineering terminology to present the content of the subject
2. uses engineering software (AutoCAD) to design equipment and devices related to the chemical industry
3. uses the computer aided design technique to speed up the work related to the preparation of technical documentation
4. analyzes drawn drawings and 3D models in terms of the ability to produce designed objects

Social competence

Student:
1. understands the need to constantly learn and improve their skills
2. can adjust the way of work to the requirements of group work
3. demonstrates responsibility for the timely implementation of tasks
4. adheres to the principles of ergonomics during long-term work at the computer