

Course description

1 General information

Course name	Technical drawing
Course code	
Level of study (B.Sc, M.Sc., Ph.D.)	B.Sc.
ECTS	4
Course manager	Dr inż. Paweł Romanowicz, M-03
Course length	One (1) semester
Coordinator for international programs	erasmus@mech.pk.edu.pl

2 Prerequisites

1. The student is able to use physical units and computer softwares.

3 Program

Type	Lectures	Classes	Labs	Computer labs	Project	Seminar
Hours	0	0	0	0	45	0

4 Contents

Project		
No.		Hours
1	Introduction to technical drawing. Drawing Standards, types of views and projections, line types, dimensioning rules. Project 1 – technical drawing of an object with the use of the first-angle projection.	8
2	The principal rules of creating drawing in AutoCAD. Project 2 – technical drawing of a pressure vessel in AutoCAD.	6
3	Cross-sections, auxiliary, detail and partial views. Project 3 – technical drawing of the part with thread.	6
4	Tolerances, ISO limits and fits. Project 4 – technical drawing of a cylindrical gear wheel in AutoCAD.	6
5	The rules of drawing of welded joints and other types of connections. Project 5 – technical drawing of an element with welded joint connection.	4
6	The principles of representation of the typical normalized mechanical parts such as bearings, shafts, springs, keyway, etc on the technical drawing. Project 6 – technical drawing of a shaft.	6
7	Assembly drawings. Project 7 – assembly drawing of an object/connection related to the field of the study.	6
8	Tests, consultations and final passes of the projects.	3

5 Learning Outcomes (skills and knowledge):

- The student is able to read and interpret information given on technical drawing.
- The student is able to present a typical mechanical parts on technical drawing.
- The student is able to prepare a technical drawing of the typical mechanical part in AutoCAD software.
- The student is able to read and define dimensioning and geometric tolerances on technical drawing for typical mechanical parts.

6 Assessment policy (examination):

- Passed all projects
- Passed all tests
- The final grade is evaluated as the average of all notes.

7 Literature

1. Paweł Romanowicz — Rysunek techniczny w mechanice i budowie maszyn, Warszawa, 2018, PWN.
2. Paweł Romanowicz, Agnieszka Bondyra — Rysunek techniczny w mechanice i budowie maszyn – dotychczasowe i aktualne zasady odwzorowania rysunkowych, Kraków, 2015, Wydawnictwo PK.
3. Andrzej Pikon — AutoCAD 2018 PL, Gliwice, 2018, Helion.
4. Bogdan Noga, Zbigniew Kosma, Jan Parczewski — Inventor, Pierwsze kroki, Gliwice, 2009, Helion.