



COURSE TITLE: Computer Aided Design

Number of contact hours: 60

Duration: 1 semester (fall / spring)

ECTS credits: 6

Programme description: This course provides an introduction to modern computer techniques in design. As part of the course, students learn the principles of design, technical drawing and full CAD construction notation and acquire the skills to build 3D objects and generate correct technical documentation. The course covers:

1. Design methods. General and detailed rules of designing. Standardisation and unification of the recording of construction.
2. Use of CAD graphics software to create 2D and 3D graphics and models.
3. Preparation of the drawing sheet and print style.
4. Preparation on the basis of an axonometric projection, using AutoCAD or SolidWorks software package, a 3D model of the element, then on the basis of it a technical executive drawing (2D), using the necessary number of views, using half a view - half a section, including dimensioning.
5. Preparation of a detailed drawing for a selected energy device or a part of it.
6. Preparation of the 3D design of the installation and automatic generation of technical documentation in the form of isometrics.

Course type: project (60)

Literature:

1. Alavala, Chennakesava R. - CAD/CAM: concepts and applications, New Delhi, 2009
2. CADFolks - AutoCAD 2020 For Beginners, 2019
3. Ibrahim Zeid — CAD/CAM theory and practice, New York, 1991, McGraw-Hill.
4. Kunwoo Lee — Principles of CAD/CAM/CAE systems, -, 1999, Addison-Wesley
5. Dobrzanski T. — Technical drawing of the machine, Warszawa, 2009, WNT
6. Alex Krulikowski — ASME Y14.5-2009. Dimensioning & Tolerancing Standard, -, 2009

Assessment method: Reports from individual project

Lecturer: Marcin Trojan

Contact person: Marcin Trojan (e-mail: marcin.trojan@pk.edu.pl)