POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name

Computer Graphics

Course

Field of study	Year/Semester
Aerospace engineering	1/2
Area of study (specialization)	Profile of study
–	general academic
Level of study	Course offered in
First-cycle studies	polish
Form of study	Requirements
part-time	compulsory

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
0	18	0
Tutorials	Projects/seminars	
0	0	

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

Rafał Mostowski, BEng, PhD

email: Rafal.Mostowski@put.poznan.pl

tel. 616652257

Faculty of Mechanical Engineering

ul. Piotrowo 3, 60-965 Poznan

Responsible for the course/lecturer:

Prerequisites

Knowledge: Knowledge of the principles of the classical structure notation. Basics of technical drawing and engineering graphics.

Skills: Ability to use a computer and peripheral devices. Ability to work in the Windows operating system, efficient use of Microsoft Office. Imagination and spatial orientation.

Social competences: Can work in a group by performing various roles. Independence in solving problems.

Course objective

Learning the methodology of designing parts and assemblies in three-dimensional 3D space, acquiring

POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

the ability to prepare 2D technical documentation as well as visualization of designed products. The use of knowledge in the field of classical structure notation.

Course-related learning outcomes

Knowledge

has an orderly, theoretically founded knowledge of engineering graphics and machine construction: technical drawing, object projection, basic principles of engineering graphics, application of computer-aided design (CAD) computer programs in machine construction [K2A_W05]

has an ordered, theoretically founded knowledge in the field of aircraft traffic analysis, calculations and simulations with the use of specialized software or tools created independently [K2A_W06]

Skills

can use the following languages: native and international to a degree enabling the understanding of technical texts and writing technical descriptions of machines in the field of aviation and aerospace using dictionaries (knowledge of technical terminology) [K2A_U01]

has the ability to formulate tasks in the field of transport engineering and their implementation using at least one of the popular tools [K2A_U18]

Social competences

Understands the need and knows the possibilities of continuous training [K1A_K01]

Is aware of the importance and understands the non-technical aspects and effects of a mechanical engineer's activity and its impact on the environment as well as responsibility for decisions [K1A_K03]

Is aware of the importance of professional behavior, compliance with the rules of professional ethics and respect for the diversity of cultures [K1A_K09]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Credit for the laboratory (project, test)

Programme content

Historical CAD outline, Raster graphics, vector graphics, 3D graphics. Application areas of CAD, CAM, CAE systems. Place of computer graphics in Computer Integrated Manufacturing CIM. Practical knowledge of the possibility of parameterization, adaptability and variants in professional CAD systems. During the laboratory classes, the implementation of the product design process in the 3D system through preliminary design, 3D model, 2D documentation, assembly of the team, animation of the product's operation.

Teaching methods

Demonstration method (presentation of the phases of practical activities) with an explanation (mechanism of action) or instructions (detailed instructions for implementation)

POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

Bibliography

Basic

1. Grafika komputerowa: laboratorium, poszczególne rozdz. oprac. Jarosław Adamiec et. al., pod red. Piotra Krawca, 2010

2. Grafika komputerowa: metody i narzędzia, pr. zbior. pod red. Jana Zabrodzkiego, 1994

3. Grafika komputerowa dla mechaników, pod red. Piotra Krawca, poszczególne rozdziały napisali: Jarosław Adamiec, Piotr Krawiec, Konrad Waluś, Krzysztof Talaśka, Dominik Wilczyński, 2018

Additional

1. Domański J.: SolidWorks 2017 Projektowanie maszyn i konstrukcji, Wydawnictwo Helion 2017

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	20	1,0
Student's own work (literature studies, preparation for tests/exam) [1]	55	2,0

---

[1] delete or add other activities as appropriate