GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	CAD - Computer Aided Design, PG_00044430
Field of study	Engineering Management

Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Obligatory subject group in the field of study
			Subject group related to scientific research in the field of study
Mode of study	Part-time studies (on-line)	Mode of delivery	blended-learning
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics		

Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. arch. Karolina Krause-Brykalska
	Teachers	dr inż. arch. Karolina Krause-Brykalska

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	16.0	0.0	0.0	16
	E-learning hours included: 12.0						

Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
	Number of study hours	16	5.0	54.0	75

Subject objectives	To familiarize the students with the basics of design using specialized CAD software. To transfer the knowledge in the field of computer-aided design and the practical use of selected CAD programs.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_W05] knows the statistical and IT methods and tools that enable the acquisition and presentation of data on the organisation's resources, including technical resources	The student understands the specific of computer-aided design process; knows the rules and standards for creating technical documentation using CAD/CAM/CAE software.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
	[K6_U06] uses basic theoretical knowledge to solve selected organizational problems, design technical solutions and manage projects, including engineering projects	The student is able to perform technical documentation using the CAD/CAM/CAE software; is able to properly format the prints, visualisations and data sheets; can transfer data between different platforms (CAD/CAM/CAE software, office software).	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject

Subject contents	Introduction. Fusion 360 user interface. Modelling of simple solids. Sketching. The use of SCULPT space. Modification of models and creation of components. Design project management. Assembly of components. Rendering and creating drawing documentation. CAM and animations.

Prerequisites and co-requisites	Basic knowledge of engineering drawing, knowledge of computer operating systems.

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Midterm colloquium	60.0%	60.0%
	Practical exercises	60.0%	40.0%

Recommended reading	Basic literature	1. Exercises shared by the instructors. 2. Software producer's training materials available online.
	Supplementary literature	1. Any literature on the design with Fusion 360.
	eResources addresses	Adresy na platformie eNauczanie: Komputerowe wspomaganie projektowania (ZI, niestacjonarne - online - 2022/2023) - Moodle ID: 24367 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24367
Example issues/ example questions/ tasks being completed	• Using 3D modelling, follow these steps: 1) create a cuboid with a base of a square with a geometric centre at the beginning of the coordinate system, with a side of 98 mm and a height of 37 mm 2) set a cylinder with a diameter of 63 mm and a height of 31 mm on the rectangular prism 3) using the SHELL command, convert the solid into a shell with a wall thickness of 5 mm 4) cut the shell in half using the YZ plane 5) create components from both halves and spread them apart • Complete the model of the crank system based on the attached design documentation including the assembly drawing and executive drawings of individual components.	
Work placement	Not applicable	