



Subject card

Subject name and code	Computer design of machines (3D), PG_00005049						
Field of study	Mechatronics, Mechatronics						
Date of commencement of studies	October 2020	Academic year of realisation of subject				2022/2023	
Education level	first-cycle studies	Subject group					
Mode of study	Full-time studies	Mode of delivery				at the university	
Year of study	3	Language of instruction				Polish	
Semester of study	5	ECTS credits				2.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Manufacturing and Production Engineering -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Piotr Sender				
	Teachers		dr inż. Piotr Sender				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
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	30		0.0		0.0	30
Subject objectives	Acquainting with 3D modeling techniques using CAD systems						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	K6_W10		The student has a basic knowledge of modeling and device operation animation application			[SW3] Assessment of knowledge contained in written work and projects	
	K6_W11		The student applies the practical use of CAD systems for 3D modeling of machine parts and assemblies			[SW3] Assessment of knowledge contained in written work and projects	
	K6_U05		Is able to properly use CAD systems tools in order to apply the right design solutions for mechatronic systems			[SU4] Assessment of ability to use methods and tools	
Subject contents	Types of models created in CAD systems. Diagram of the procedure during part modeling. The rules of assembling parts into subassemblies, assemblies and ready devices and machines. Creating animations. Getting to know welding modules, shooting models, etc.						
Prerequisites and co-requisites	The ability to read technical documentation. Possessing knowledge in the field of technical drawing, standards and basics of machine construction						
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade	
	3D modeling of parts - to be done		60.0%			100.0%	
Recommended reading	Basic literature		Jaskulski A.: Autodesk Inventor 2009PL/2009+, metodyka projektowania. PWN. Warszawa 2009.				

	Supplementary literature	Selected online journal articles: 1. Computer-Aided Design 2. Journal of Manufacturing Systems 3. Computers in Industry
	eResources addresses	
Example issues/ example questions/ tasks being completed	Zasadnicze różnice pomiędzy modelem powierzchniowym a bryłowym. Wykonać model 3D wałka wg rysunku.	
Work placement	Not applicable	