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						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8139						

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	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Zasadnicze różnice pomiędzy modelem powierzchniowym a bryłowym. Wykonać model 3D wałka wg rysunku.	
Work placement	Not applicable	