



Subject card

Subject name and code	Metallurgy and welding of metals, PG_00038784						
Field of study	Mechatronics, Mechatronics						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
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	Full-time studies	Mode of delivery			blended-learning		
Year of study	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Materials Engineering and Bonding -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Aleksandra Świerczyńska					
	Teachers	dr inż. Aleksandra Świerczyńska mgr inż. Adrian Wolski mgr inż. Anna Janeczek dr inż. Michał Landowski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	30
	E-learning hours included: 21.0						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8512 Adresy na platformie eNauczanie:						
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	5.0	40.0	75		
Subject objectives	The aim of the course is to learn basic of welding technologies, casting and metal forming.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_W05	Student distinguishes between methods of producing, processing and welding metals.			[SW1] Assessment of factual knowledge		
	K6_U01	Student is able to independently analyze textbook sources on metal technology and welding.			[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	Casting, Metal forming, Classification of welding processes, Gas welding, MMA welding, Submerged arc welding, TIG welding, MIG / MAG gas shielded welding, Resistance Welding, Thermal cutting						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold			Percentage of the final grade		
	Laboratory short tests	56.0%			20.0%		
	Test	56.0%			80.0%		

Recommended reading	Basic literature	<p>1. Klimpel A.: Technologia spawania i cięcia metali. WNT. Warszawa 1999.</p> <p>2. Walczak W. (red.): Spawalnictwo. Ćwiczenia laboratoryjne. Wydawnictwo Politechniki Gdańskiej. Gdańsk, 2000.</p> <p>3. Dobrzański A.L.: Podstawy nauki o materiałach i materiałoznawstwo. Materiały inżynierskie i podstawy projektowania materiałów. WNT. 2002.</p>
	Supplementary literature	1. Pilarczyk J., Pilarczyk J.: Spawanie i napawanie elektryczne metali. Wydawnictwo Śląsk, Katowice 1996.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Describe the welding method. Describe the resistance welding method. Describe the soldering method.	
Work placement	Not applicable	