



Subject card

Subject name and code	Diploma laboratory, PG_00048727						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	February 2022	Academic year of realisation of subject				2022/2023	
Education level	second-cycle studies	Subject group				Optional subject group	
Mode of study	Full-time studies	Mode of delivery				at the university	
Year of study	2	Language of instruction				Polish	
Semester of study	3	ECTS credits				5.0	
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 hab. inż. Barbara Kościelska				
	Teachers		dr hab. inż. Grażyna Jarosz dr inż. Tadeusz Miruszewski dr hab. inż. Barbara Kościelska dr hab. inż. Natalia Wójcik dr hab. inż. Aleksandra Mielewczyk-Gryń				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	75.0	0.0	0.0	75
	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	75		5.0		60.0	140
Subject objectives	The aim of the course is to acquire knowledge and practical skills necessary for the correct implementation of the tasks set in the master's thesis. Planning experiments, learning the principles of research methods and their practical carrying out, principles and methods of analysis of results and their presentation.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	K7_W05		The student has the skills to use the methods of optical and electron microscopy, diffraction methods, methods of corrosion research, research on mechanical properties.			[SW3] Assessment of knowledge contained in written work and projects	
	K7_K01		The student is able to analyze the state of knowledge and conduct a discussion with the teacher and colleagues.			[SK5] Assessment of ability to solve problems that arise in practice	
	K7_U03		The student has the ability to formulate research hypotheses on the design, manufacture and processing of materials. He can create an experimental plan, describe and justify physical, chemical and mechanical methods of material testing.			[SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools	
	K7_U04		The student has the ability to prepare research results in writing, analyze them, discuss and conclude			[SU5] Assessment of ability to present the results of task [SU2] Assessment of ability to analyse information	
	K7_W06		The student has knowledge of methods, techniques and research equipment for the production and processing of materials, heat and plastic treatment, surface engineering, material bonding, material testing methods			[SW3] Assessment of knowledge contained in written work and projects	
Subject contents	The curriculum should include elements of individual learning agreed with the teacher responsible for the diploma dissertation						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Evaluation of the development of research results	50.0%	100.0%
Recommended reading	Basic literature	Textbooks and publications agreed with the teacher taking care of the thesis.	
	Supplementary literature	Textbooks and publications agreed with the teacher taking care of the thesis.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Assessment of the influence of elements of the nanohydroxyapatite coating production process on their properties. 2. Characteristics of welds of dissimilar steels produced in specific welding conditions. 3. Hydrogen degradation of zirconium alloys subjected to a previous oxidation process		
Work placement	Not applicable		