

Subject card

Subject name and code	Metal Science 2, PG_00044035								
Field of study	Ocean Engineering, (Ocean Enginee	ring						
Date of commencement of studies	October 2020		Academic year of realisation of subject			2020/2021			
Education level	first-cycle studies		Subject group						
Mode of study	Part-time studies		Mode of delivery			at the university			
Year of study	1		Language of instruction			Polish			
Semester of study	2		ECTS credits			2.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Ship Manufacturing Technology, Quality Systems and Materials Science -> Faculty of Mechanical Engineering and Ship Technology						culty of		
Name and surname	Subject supervisor		dr inż. Milena Supernak						
of lecturer (lecturers)	Teachers		mgr inż. Krzysztof Emilianowicz						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
	Number of study hours	0.0	0.0	20.0 0.0			0.0	20	
	E-learning hours included: 0.0								
	Adresy na platformie eNauczanie:								
Learning activity and number of study hours	Learning activity	Participation in classes include plan		Participation in consultation h		Self-study		SUM	
	Number of study hours	20		3.0		27.0		50	
Subject objectives	Familiarizing students with the construction of metals and their alloys. Determination and testing of the structure of metals. Study of mechanical and physical properties of metals and their alloys.								
Learning outcomes	Course outcome Subject outcome Method of verification								
	[K6_W03] has a basic knowledge on hydromechanics, thermodynamics, machine construction, ecology, materials science and electronics necessary to understand the construction and operation principles of ocean technology objects and equipment		structure, properties and functionality of the material.			[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects			
			of materials. Student identifies the basic properties of metallic materials. Student identifies types			[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject			
Subject contents Static Tensile Test									
	 Impact test of steel Macro and microscopic examinations Analysis of iron-carbon structure structures Tests of iron alloys (cast steel, cast iron, non-alloyed steels) 								
Prerequisites and co-requisites									
Assessment methods and criteria	Subject passing criteria		Passing threshold			Percentage of the final grade			
	Reports from laboratory classes		70.0%			50.0%			
	Reports from laborat	ory classes	70.0%			50.0%			

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Recommended reading	Basic literature				
		1.Krzysztofowicz T.: Metaloznawstwo okrętowe-ćwiczenia laboratoryjne. WPG, Gdańsk, 2002			
		Dobrzański L.A.: Podstawy nauki o materiałach i metaloznawstwo.WNT, Warszawa, 2002.			
	Supplementary literature	Głowacka M., Zieliński A.: Podstawy Materiałoznawstwa. WPG, Gdańsk 2011			
	eResources addresses				
Example issues/ example questions/ tasks being completed	1. Static Tensile Test 2. Impact test of steel 3. Macro and microscopic examinations 4. Analysis of iron-carbon structure structures 5. Testing of iron alloys (cast steel, cast iron, non-alloyed steels)				
Work placement	Not applicable				

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