



## Subject card

Subject name and code	Materials Science III, PG_00040178						
Field of study	Mechanical Engineering, Mechanical Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2021/2022		
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			at the university		
Year of study	2	Language of instruction			English PN-EN and ISO standards available in Polish only.		
Semester of study	3	ECTS credits			1.0		
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. Krzysztof Krzysztofowicz				
	Teachers		dr inż. Krzysztof Krzysztofowicz				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	0.0	0.0	15
	E-learning hours included: 0.0 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	15		3.0		7.0	25
Subject objectives	Follow up of Materials Science II						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_W08	Students realize that different material's properties must be taken into consideration in accordance with the final object's destination and operation environment.			[SW3] Assessment of knowledge contained in written work and projects		
	K6_U10	Students know how to take different material's properties into consideration in accordance with the final object's destination and operation environment.			[SU5] Assessment of ability to present the results of task [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment		
	K6_W03	Students know how dedicated material properties should be checked, what methods and devices should be used.			[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	<ul style="list-style-type: none"><li>• hardenability,</li><li>• stainless steels,</li><li>• thermo-chemical treatment,</li><li>• Cu alloys,</li><li>• Al alloys,</li><li>• bearing alloys.</li></ul>						
Prerequisites and co-requisites	Knowledge from Materials Science I & II, Fe-Fe <sub>3</sub> C chart.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	lab reports		51.0%		100.0%		

Recommended reading	Basic literature	"Metaloznawstwo. Materiały do ćwiczeń laboratoryjnych" pod redakcją J. Hucińska, Wydawnictwo Politechniki Gdańskiej
	Supplementary literature	"Podstawy materiałoznawstwa" pod redakcją Marii Głowackiej i Andrzeja Zielińskiego, Wydawnictwo Politechniki Gdańskiej;  M. Blicharski "Inżynieria Powierzchni" Wydawnictwo WNT
	eResources addresses	
Example issues/ example questions/ tasks being completed	Iron-carbon phase chart	
Work placement	Not applicable	