GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Materials Science III, PG_00055120		
Field of study	Mechanical Engineering		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2027/2028
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
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 -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Krzysztof Krzysztofowicz	
	Teachers		

Lesson types

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

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_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
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

Subject contents

Course content – laboratory
- hardenability,
- stainless steels,
- thermo-chemical treatment,
- Cu alloys,
- Al alloys,
- bearning alloys.

Prerequisites and co-requisites

Knowledge from Materials Science I & II, Fe-Fe3C 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	
Practical activites within the subject	Not applicable	

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