

§ GDAŃSK UNIVERSITY § OF TECHNOLOGY

Subject card

Subject name and code	Material science III, PG_00039878							
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			Polish		
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 hab. inż. Marek Szkodo						
	Teachers		dr inż. Artur Sitko dr inż. Łukasz Pawłowski					
	Dorota Rogala-Wielgus							
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
of instruction	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: Materiałoznawstwo III MiBM studia stacjonarne - Moodle ID: 18167 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18167							
Learning activity and number of study hours	Learning activity	Participation in classes include plan	didactic Participation in ed in study		in nours	Self-study		SUM
	Number of study hours	15		4.0		6.0		25
Subject objectives	Student knows materials and technological processes being in the field of subject. Student can identify of materials in terms of theirs microstructures. Student has knowledge regarding of heat treatments and termo- chemical treatments of analized materials. Student knows the role of treatments in the context of theirs influence on properties and applications of analized materials.							
Learning outcomes	Course outcome		Subject outcome			Method of verification		
	[K6_W03] possesses and is able to practically apply the knowledge on the construction, properties and testing methods of construction materials					[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W08] possesses basic knowledge including the methodology of designing machine parts, mechanical devices, selection of construction materials, manufacturing and operation, with the lifetime cycle					[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		
	[K6_U10] is able to formulate the principles of selecting a material for a construction, ensuring the correct operation of a device					[SU2] Assessment of ability to analyse information		
Subject contents	General programme of subject involves: Temper of steel, Tool steels, Stainless steel, Aluminium and copper alloys, Bearing steel, Repeating exercise, Final exercise.							
Prerequisites and co-requisites	Student should have basic knowledge about microstructural aspects connected with materials. Student should have basic knowledge about applied heat treatments. This knowledge should be obtained during the subject: Material Science I (1-year, I-semester).							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade		
		50.0%	100.0%		
Recommended reading	Basic literature	Corporate work under the editorship of M. Głowacka, A. Zieliński. The basics of material science. Publisher PG, Gdansk, 2014. Corporate work under the editorship of J. Hucińska. Metal science. Publisher PG, Gdansk, 1995. Corporate work under the editorship of M. Głowacka. Metal science. Publisher PG, Gdansk, 1996.			
	Supplementary literature	W. Callister Jr., D. G. Rethwisch: Materials Science and Engineering: An Introduction, 10th Edition, 2018.			
	eResources addresses	Materiałoznawstwo III MiBM studia https://enauczanie.pg.edu.pl/moodle	stacjonarne - Moodle ID: 18167 e/course/view.php?id=18167		
Example issues/ example questions/ tasks being completed					
Work placement	Not applicable				