

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Materials and Civilisation Development, PG_00058988							
Field of study	Materials Engineering, Materials Engineering, Materials Engineering							
Date of commencement of studies	October 2022		Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies		Subject group			Obligatory subject group in the field of study Humanistic-social subject group		
Mode of study	Full-time studies		Mode of delivery			at the university		
Year of study	1		Language of instruction			Polish		
Semester of study	1		ECTS credits			5.0		
Learning profile	general academic profile		Assessment form			assessment		
Conducting unit	Division of Structural Materials Technology and Welding -> Institute of Manufacturing and Materials Technology -> 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	Projec	:t	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0		0.0	60
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM
	Number of study hours	60		5.0		60.0		125
Subject objectives	To familiarize students with the importance of materials in social, cultural and technical development. Presentation of current achievements in materials engineering.							
Learning outcomes	Course outcome		Subject outcome			Method of verification		
	K6_U01		can use properly selected analytical methods			[SU1] Assessment of task fulfilment		
	K6_W08		has basic knowledge of development trends			[SW1] Assessment of factual knowledge		
	K6_K01		understands the need to improve professional and personal competences			[SK3] Assessment of ability to organize work		
	K6_U07		can obtain information from various sources			[SU1] Assessment of task fulfilment		
	K6_W10		has basic knowledge of quality management			[SW1] Assessment of factual knowledge		

Subject contents	The concept of engineering materials and their division. Definition of civilization, known civilizations in the history of mankind, historical eras. The history of the use of stone from the Paleolithic to the present day; the use of stone in agriculture and weapons production, the development of housing. Invention and application of household ceramics. The use of wood by civilizations; the history of the development of watercraft and flying machines, the use of wood in the production of weapons, agricultural tools, everyday life. Other prehistoric materials: animal bones and skins. The Copper and Bronze Age: metal smelting, production of utility items, the importance of copper and bronze products in the development and decline of civilization. The use of gold and silver by civilizations. The Iron Age: the production of welded iron, the development of heat and thermo-chemical treatment, the emergence of large-scale manufacturing technologies, the emergence of modern smelting methods. The present: the use of other metals and their influence on the development of civilization. The use of natural polymers in the history of mankind, the invention of artificial polymers and their importance for the present civilization. Development of electronic and magnetic functional materials. The importance of the development of materials. The role of polymers in the development of civilization of civilization and their general properties. Applications of the main groups of engineering materials. History of matallurgy of ferrous alloys with examples of products and metallographic observations of their structure. Historical examples of polymers. Examples of functional leectronic and magnetic materials in historical terms.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
	zaliczenie	100.0%	40.0%				
	kolokwium	60.0%	60.0%				
Recommended reading	Basic literature	Leszek A. Dobrzański, Podstawy nauki o materiałach i metaloznawstwo, Wydawnictwa Naukowo-Techniczne 2002					
	Supplementary literature	Journals in the literature databases of the GUT library					
	eResources addresses Adresy na platformie eNauczanie:						
Example issues/ example questions/ tasks being completed							
Work placement	Not applicable						

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