



Subject card

Subject name and code	, PG_00062615						
Field of study	Civil Engineering						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
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	Katedra Wytrzymałości Materiałów -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Elżbieta Haustein					
	Teachers	mgr inż. Lucyna Grabarczyk dr inż. Marzena Kurpińska dr inż. Elżbieta Haustein					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	10.0	0.0	0.0	25
	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	25	0.0		0.0	25	
Subject objectives	Understanding the classification of building materials in terms of construction standards depends on the type and purpose of building						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U01] Apply knowledge and understanding of mathematics as well as sciences and engineering disciplines underlying civil engineering to solve engineering problems and issues.	The student will be able to recognize building materials depending on their type and purpose in construction.			[SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_U02] Analyse & solve engineering issues & problems in the field of civil engineering by applying appropriate and relevant established analytical, numerical and experimental methods.	Student uses appropriate analytical methods in selecting the type of building materials depending on their purpose.			[SU4] Assessment of ability to use methods and tools		
	[K6_U05] Conducts research (obtaining information, simulations, experimental methods) in the field of construction in order to solve specific tasks and report research results.	The student will acquire skills in determining the basic properties of Material and conducting their research.			[SU4] Assessment of ability to use methods and tools		
	[K6_W02] Demonstrate knowledge and understanding of the processes and established methods of analysis / solution of engineering issues & problems in the field of civil engineering and of their limitations.	The student knows the principles of analytical methods in building materials and understands the importance of their implementation.			[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W06] Demonstrates practical knowledge and understanding of materials, devices and tools, processes and technologies in the field of civil engineering (and their limitations).	The student knows the basic properties of building materials and is able independently perform basic tests in accordance with construction standards.			[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	Technical features of building materials. Ceramic building material. Products based on gypsum binders. Building glass properties and products used in construction. Wood and wood-based construction products used in construction. Materials for thermal insulation and sound protection. Bitumen and artificial resin materials for moisture insulation. Plastics properties, classification, products, use in construction.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		100.0%	50.0%
		50.0%	50.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"> Gantner E., Chojczak W. Building Materials. Binders, aggregates, mortars, concrete. Laboratory exercises. University of Technology, Warsaw 2013. Chojczak W. Building Materials. Technical properties, natural stone, ceramics. Laboratory exercises, part 1. Warsaw University of Technology, Warsaw 2016 Chojczak W. Building Materials. Wood, glass, bituminous binders, plastics. Laboratory exercises, part 2. University of Technology, Warsaw 2016 	
	Supplementary literature	1. Bołtryk M., Małaszkiwicz D., Orzepowski G. Building Materials. PWN. Warsaw 2022.	
	eResources addresses	Adresy na platformie eNauczenie: Materiały Budowlane, 2 semestr, I stopnia, st. niestacjonarne - Moodle ID: 38664 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=38664	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> Provide classifications of building materials depending on type and purpose. Discuss the technical features of building materials. List the types of plastic construction products. Discuss the role of bitumen products in construction. Discuss the use of wood-like products for thermal insulation in construction. 		
Work placement	Not applicable		