



## Subject card

Subject name and code	Refurbishment and modernization of buildings, PG_00044224						
Field of study	Civil Engineering						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Optional subject group		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	4		Language of instruction		Polish		
Semester of study	7		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Building Structures and Material Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Łukasz Skarżyński				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	15.0	0.0	60
	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	60		5.0		60.0	125
Subject objectives	Students gain ability to determine reasons of structure damage. Student knows how to prepare project of strengthening of the structures.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U06] can design steel, concrete (including reinforced), wood and masonry constructions and its elements		Student is able to design the renovation and reinforcement of selected elements and typical structures		[SU4] Assessment of ability to use methods and tools		
	[K6_W06] knows the rules of constructing and dimensioning of building elements of: steel, reinforced concrete, wood, masonry.		Students is familiar with the principles of construction and dimensioning of elements of renovated building structures: metal, reinforced concrete, wood, masonry		[SW1] Assessment of factual knowledge		
	[K6_U01] can evaluate and list the loads acting on constructions		Students is able to evaluate and list the loads acting on renovated buildings		[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	Classification of repairs, basic elements of building durability, inspections of buildings, repair documentation. Technical conditions for building exploitation. Reinforcement of bearing capacity elements of walls, slab floors, roof floors, roofs, foundations and stairs.						
Prerequisites and co-requisites	No requirements						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Project		50.0%		40.0%		
	Midterm colloquium		50.0%		60.0%		
Recommended reading	Basic literature		1. Maślowski E., Spiżewska D.: Wzmacnianie konstrukcji budowlanych. Arkady 1999. 2. Małyszko L., Orłowicz R.: Konstrukcje murowe zarysowania i naprawy. Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego w Olsztynie 2000.				
	Supplementary literature		No requirements				
	eResources addresses		Adresy na platformie eNauczanie:				
Example issues/ example questions/ tasks being completed							
Work placement	Not applicable						