



## Subject card

Subject name and code	Construction and Physics of Building Structures, PG_00044687						
Field of study	Civil Engineering						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2022/2023		
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	Part-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		exam		
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. Ewelina Korol				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	25.0	0.0	0.0	10.0	0.0	35
	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	35		5.0		85.0	125
Subject objectives	Acquiring knowledge in the field of construction of residential and communal buildings, as well as the basics of designing objects and construction works, as well as managing construction works; acquainting with technologies and principles of building organization, computer techniques and modern technologies; developing the ability to identify significant problems in the construction industry; preparing the graduate for work in independent positions as well as teamwork and education at the second level of studies.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W06] knows the rules of constructing and dimensioning of building elements of: steel, reinforced concrete, wood, masonry.		The student knows the principles of construction and dimensioning of building construction elements: metal, reinforced concrete, wooden, masonry.				
	[K6_U06] can design steel, concrete (including reinforced), wood and masonry constructions and its elements		The student knows how to design selected elements and typical metal, reinforced concrete, composite, wooden and wall constructions.				
	[K6_W09] knows the principles of determining of loads acting on basic constructions (e.g. general, industrial, bridge, water, marine, transport objects) and rules of its constructing		The student knows the rules for determining the loads of selected construction objects (general, industrial, bridge, water, sea or transport) and the principles of their construction.				
	[K6_U08] can calculate the energy balance of a building		The student can prepare an energy balance for a building.				
	[K6_W12] Has basic knowledge on building physics, including heat and moisture migration in buildings, acoustics and energy demand		The student knows the basics of building physics regarding the migration of heat and humidity in buildings, their acoustics and determining the energy demand of buildings.				
Subject contents	Basic knowledge of the law in construction. • Basic definitions of general construction. • Requirements for construction and construction drawings. • Construction systems. • Dimensional coordination in buildings. • Basic knowledge about technical conditions for buildings and their location. • Preliminary information about walls, window and door lintels, ceilings, roofs, terraces, balconies, loggias and stairs.						

Prerequisites and co-requisites	Basic knowledge about technical drawing, building materials, building mechanics and material strength.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	60.0%	50.0%
	Project	60.0%	50.0%
Recommended reading	Basic literature	1. Kobiak J., Stachurski W.: Konstrukcje żelbetowe t.1 Warszawa: Arkady 1984. 2. Michalak H., Pyrak S., Domy jednorodzinne – konstruowanie i obliczenia: Arkady 2005. 3. Niedostatkiewicz M., Majewski T., Skuza M., Bobiński J.: Budownictwo ogólne – Katalog rozwiązań konstrukcyjno – materiałowych, Skrypt PG. 4. Pierzchlewicz J., Jarmontowicz R.: Budynki murowane. Warszawa: Arkady 1994.	
	Supplementary literature	1. Żenczykowski W.: Budownictwo ogólne, t. 2/1. Warszawa: Arkady 1990 2. Praca zbiorowa: Poradnik majstra budowlanego. Warszawa: Arkady 1985. 3. Praca zbiorowa: Poradnik inżyniera i technika budowlanego, t. V. Warszawa: Arkady 1986. 4. Prawo budowlane.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		