

Subject card

Subject name and code	Industrial Construction , PG_00048190								
Field of study	Civil Engineering								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2022/2023			
Education level	first-cycle studies		Subject group			Optional subject group 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	3		Language of instruction			Polish			
Semester of study	6		ECTS credits			4.0			
Learning profile	general academic profile		Assessment form			assessment			
Conducting unit	Department of Building Structures and Material Engineering -> Faculty of Civil and Environmental Engineering						ntal		
Name and surname	Subject supervisor	dr inż. Krzysztof Drąg							
of lecturer (lecturers)	Teachers								
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory			Seminar	SUM	
	Number of study hours	15.0	0.0	0.0	15.0		0.0	30	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes include plan		Participation in consultation hours		Self-study		SUM	
	Number of study hours	30		5.0		65.0		100	
Subject objectives	The student knows typical industrial structures in the area of cubature structures, supporting structures and special structures. The student is able to define the basic principles of designing and making such structures. The student is able to determine the loads and analyze the static work of selected industrial structures. The student is able to design selected industrial special structures such as chimneys, wind towers and other tower structures.								
Learning outcomes	Course outcome		Subject outcome			Method of verification			
	[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					[SW1] Assessment of factual knowledge			
	[K6_U04] can correctly choose tools (analytical or numerical) to solve engineering problems in design of structures or construction process					[SU2] Assessment of ability to analyse information			
	[K6_U11] knows and applies rules of construction law; can estimate risk of construction works and implement proper security routines; obeys the rules of occupational safety and health					[SU3] Assessment of ability to use knowledge gained from the subject			
	[K6_U05] is able to use selected software supporting design decisions in civil engineering; can critically evaluate numerical calculations of constructions					[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment			
	[K6_K03] can think and act creatively and enterprisingly, obeys the etics code						Assessment of problems that a e		
Subject contents	Types of industrial facilities and principles of their construction. Principles of designing industrial tower structures. Principles of dimensioning of industrial structures, taking into account the specificity of the existing loads. Calculation of an industrial tower structure taking into account dynamic and temperature loads.								
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Prerequisites and co-requisites	Knowledge of building statics. Knowledge of the basics of general construction. Knowledge of the principles of designing concrete, steel and masonry structures.						
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
		60.0%	50.0%				
		60.0%	50.0%				
Recommended reading	Basic literature 1. Lipiński J.: Fundamenty pod maszyny. Arkady 1996						
		Budownictwo przemysłowe, ATR					
	3. Falkowski J.: Konstrukcje wsporcze pod maszyny, WSI K 1995						
		przemysłowego. PWN 1984					
	Supplementary literature	1. PN 80/B-03040 Fundamenty i konstrukcje wsporcze pod maszyny					
		nneys - Part 1: General reguirements					
		3. EN 13084-2 Free-standing chimneys - Part 2: Concrete chimneys					
	eResources addresses	Adresy na platformie eNauczanie: Budownictwo Przemysłowe I stropień I studia niestacjonarne - Moodle ID: 30348					
		https://enauczanie.pg.edu.pl/moodle/course/view.php?id=30348					
Example issues/ example questions/ tasks being completed	Students design an industrial tower structure subject to dynamic wind pressure and thermal loads.						
Work placement	Not applicable						

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