



Subject card

Subject name and code	, PG_00062840									
Field of study	Civil Engineering									
Date of commencement of studies	October 2024	Academic year of realisation of subject		2025/2026						
Education level	first-cycle studies	Subject group								
Mode of study	Full-time studies	Mode of delivery		at the university						
Year of study	2	Language of instruction		Polish						
Semester of study	4	ECTS credits		3.0						
Learning profile	general academic profile	Assessment form		assessment						
Conducting unit	Department of Structural Mechanics -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology									
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Mateusz Sondej								
	Teachers									
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar				
	Number of study hours	0.0	0.0	0.0	30.0	0.0				
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	30	0.0		0.0	30				
Subject objectives	The aim of the course is to broaden the knowledge of the theory of building structures and to verify the theory by means of experimental research. The aim of the course is also to engage students in designing and performing experiments on their own.									
Learning outcomes	Course outcome		Subject outcome		Method of verification					
	[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 conducts experimental research in the field of construction in order to solve specific tasks and report research results.		[SU5] Assessment of ability to present the results of task					
	[K6_K02] Can work effectively in a group, as well as function in teams, which may consist of representatives of various branches and levels.		The student is able to work effectively in a group, as well as function in teams, which may consist of representatives of different industries and levels.		[SK1] Assessment of group work skills					
	[K6_K03] Can effectively, clearly and unambiguously convey information, describe activities and communicate their results/ outcomes to engineers or a wider audience using appropriate communication methods and tools.		The student is able to effectively, clearly and unambiguously convey information, describe activities and communicate their outcomes/ outcomes to engineers or a wider audience using appropriate communication methods and tools.		[SK5] Assessment of ability to solve problems that arise in practice					
	[K6_W05] Demonstrate knowledge and understanding of research methods (obtaining information, simulations, experimental methods) in the field of civil engineering.		The student demonstrates knowledge and understanding of research methods (information acquisition, simulations, experimental methods) in the field of construction		[SW3] Assessment of knowledge contained in written work and projects					
Subject contents	Course content – project 1. Identification of tension zones of member systems,2. Identification of static diagrams of structures,3. Analysis of statics and spatial stability of truss structure,4. Design and construction of lattice structure,5. Composite and multiple beam,6. Glued and screwed connection of structural elements,7. Load-bearing capacity of fasteners of structural elements,8. Statics of the retaining wall,9. Investigation of the phenomenon of jumping of the structure to a different equilibrium position,10. Reactions									
Prerequisites and co-requisites	Completion of courses: General Mechanics (BSP012), Strength of Materials (BSP015). Course implementation: Structural Mechanics (BSP020).									

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test	0.0%	100.0%
Recommended reading	Basic literature	1. Bielewicz E., Wytrzymałość materiałów, Gdańsk 2006 2. Branicki C.(red.): Zadania z Mechaniki Budowli, Tom II, Układy statycznie niewyznaczalne, Skrypt PG, 1976 3. Chudzikiewicz A.: Statyka budowli. t.1 Układy statycznie wyznaczalne. PWN Warszawa 1976. 4. Cywiński Z.: Mechanika budowli w zadaniach Tom I i II, PWN, 1984 (i wydania późniejsze). 5. Dyląg Z., Krzemińska-Niemiec E.: Mechanika budowli, Tom 2 i 3, Wyd. Pol. Białostockiej 1993 (i wydania późniejsze). 6. Konopińska-Zmysłowska V., Mleczek A., Oziębło M., Tomaszewska A., Wybrane problemy mechaniki układów prętowych. Zbiór zadań dla studentek i studentów kierunku inżynieria środowiska. Wydawnictwo Politechniki Gdańskiej, Gdańsk 2016 7. Przewoźki J., Górska J.: Podstawy mechaniki budowli, Arkady Warszawa 2009 8. Skowronek M., Górska J., Kreja I., Smakosz Ł: Zbiór zadań egzaminacyjnych z mechaniki ogólnej - statycznie wyznaczalne układy prętowe, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2022.	
	Supplementary literature	no	
	eResources addresses	Basic https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37200 - Course website	
Example issues/ example questions/ tasks being completed	Static diagrams of the structure, Statics and spatial stability of truss structures, Composite and multiple beams, Glued and screwed connection of structural elements, Statics of the retaining wall.		
Practical activites within the subject	Not applicable		

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