

## 。 GDAŃSK UNIVERSITY OF TECHNOLOGY

## Subject card

Subject name and code	, PG_00062840								
Field of study	Civil Engineering								
Date of commencement of studies	October 2023		Academic year of realisation of subject			2024/2025			
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 Structu	-> Faculty of Civil and Environmental Engineering							
Name and surname	Subject supervisor	dr inż. Mateusz Sondej							
of lecturer (lecturers)	Teachers								
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	Number of study hours	0.0	0.0	0.0	) 30.0		0.0	30	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity	Participation in classes includ plan	n didactic ed in study	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_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			
	[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_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_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			
Subject contents	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 passin	Passing threshold 0.0%			Percentage of the final grade 100.0%				
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Recommended reading	Basic literature	<ol> <li>Bielewicz E., Wytrzymałość materiałów, Gdańsk 2006</li> <li>Branicki C.(red.): Zadania z Mechaniki Budowli, Tom II, Układy statycznie niewyznaczalne, Skrypt PG, 1976</li> <li>Chudzikiewicz A.: Statyka budowli. t.1 Układy statycznie wyznaczalne. PWN Warszawa 1976.</li> <li>Cywiński Z.: Mechanika budowli w zadaniach Tom I i II, PWN, 1984 (i wydania późniejsze).</li> <li>Dyląg Z., Krzemińska-Niemiec E.: Mechanika budowli, Tom 2 i 3, Wyd. Pol. Białostockiej 1993 (i wydania późniejsze).</li> <li>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</li> <li>Przewłócki J., Górski J.: Podstawy mechaniki budowli, Arkady Warszawa 2009</li> <li>Skowronek M., Górski J., Kreja I., Smakosz Ł: Zbiór zadań egzaminacyjnych z mechaniki ogólnej - statycznie wyznaczalne układy prętowe, Wydawnictwo Politechniki Gdańskiej, Gdańskiej, Gdańsk 2022.</li> </ol>			
Su eF	Supplementary literature	no			
	eResources addresses	Podstawowe			
		https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37200 - Course website			
		Adresy na platformie eNauczanie:			
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.				
Work placement	Not applicable				

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