GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00070538						
Field of study	Civil Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject	2025/2026			
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	8		ECTS credits	2.0			
Learning profile	general academic profile		Assessment form	assessment			
Conducting unit	Department of Engineering Structures -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	mgr inż. Maciej Malinowski					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	30
	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	Expanding knowledge about bridge construction. Discussion of the scope, form, and subject matter of engineering projects. Presentation and discussion of progress on ongoing engineering projects.						

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.	Conducts research (information acquisition, simulations, experimential methods) in the field of bridge construction in order to solve specific tasks and report research results.	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
[K6_W03] Demonstrate knowledge and understanding of the processes, established standards and design methods in the civil engineering subject area and of their limitations.	Demonstrates knowledge and understanding of the processes and established standards and design methods for bridge construction and is aware of their limitations.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K6_K04] Engages in independent lifelong learning and individually follows the development of science and technology in the field of civil engineering.	Engages in independent lifelong learning and independently tracks developments in science and technology in the field of civil engineering and bridge construction	[SK1] Assessment of group work skills [SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice
[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.	Is able to 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.	[SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice
[K6_K01] Is aware of the key aspects of professional, ethical and social responsibility related to management, business operation, decision making and opinion formulation in civil engineering.	Is aware of the key aspects of professional, ethical and social responsibility related to management, conducting business, making decisions and formulating opinions in bridge construction.	[SK1] Assessment of group work skills [SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice

Subject contents

Course content – seminar
Selected aspects of bridge engineering topics discussed by students in the form of presentations on a selected topic.

Selected aspects of bridge engineering lectures on selected topics.

Scope, form, and topics of engineering projects.

Presentation and discussion of progress on the topics of engineering projects being implemented.

Prerequisites and co-requisites

Structural Statics

Strength of Materials

Basic Information on Bridge Structures

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
seminar	75.0%	100.0%

Recommended reading	Basic literature	Domestic and foreign literature on the discussed issues in the field of bridge engineering (articles, books, monographs) proposed by the speakers (students and the seminar leader).
	Supplementary literature	1. Ryżyński A., Wołowicki W., Skarżewski J., Karlikowski J.: Mosty stalowe, PWN, Warszawa Poznań, 1984. 2. Szczygieł J.: Mosty z betonu zbrojonego i sprężonego. WKiŁ, Warszawa 1974 (1972). 3. Karlikowski J., Sturzbecher K.: Mosty stalowe. Mosty belkowe i zespolone. Przewodnik do ćwiczeń projektowych Politechnika Poznańska, Poznań, 2003. 4. Karlikowski J.,Madaj A., Wołowicki W.: Mostowe konstrukcje zespolone stalowo-betonowe. WKŁ, Warszawa 2007r. 5. Czudek H.: Podstawy mostownictwa metalowego, Politechnika Warszawska, Warszawa, 1997. 6. Hydzik J.: Mosty kolejowe, WKŁ, Warszawa, 1986. 7. Danielski L.: Mosty metalowe, Politechnika Wrocławska, Wrocław, 1983. 8. Cholewo J., Sznurowski M.: Mosty kolejowe i fundamentowanie ,WKŁ, Warszawa, 1965. 9. Korelewski J.: Mosty stalowe, Politechnika Krakowska, Kraków, 1980. 10. Szelągowski F.: Mosty metalowe, WKŁ, Warszawa, 1966. 11. Pszenicki A.: Mosty stalowe nitowane, Wydawnictwa Komunikacyjne, Warszawa, 1954. 12. Leonhardt F.: Podstawy budowy mostów betonowych. WKiŁ, Warszawa 1982. 13. Madaj A., Wołowicki W.: Mosty betonowe. WKiŁ, Warszawa 1998. 14. Madaj A., Wołowicki W.: Budowa i utrzymanie mostów. WKiŁ, Warszawa 1995. 15. Furtak K.: Mosty Zespolone. PWN, Warszawa 1999. 16. Siwowski T.: Projektowanie mostów według Eurokodów. Elamed 2016. 17. Siwowski T.: Zastosowanie Eurokodów w projektowaniu mostów. Oficyna Wydawnicza Politechniki Rzeszowskiej, 2016. 18. Siwowski T., Turoń B.: Projektowanie mostów zespolonych według Eurokodu 4. Oficyna Wydawnicza Politechniki Rzeszowskiej, 2016. 19. Karlikowski J., Madaj A., Wołowicki W.: Mosty zespolone stalowo-betonowe. Zasady projektowania wg PN-EN 1994-2. WKŁ 2016. 20. Machelski Cz.: Ruchome obciążenia obiektów mostowych. Dolnośląskie Wydawnictwo Edukacyjne 2015.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Practical activites within the subject	Not applicable	

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