



Subject card

Subject name and code	, PG_00069302						
Field of study	Mosty i tunele II						
Date of commencement of studies	October 2022		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	4		Language of instruction		Polish		
Semester of study	7		ECTS credits		1.0		
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		dr inż. Arkadiusz Sitarski				
	Teachers		dr inż. Arkadiusz Sitarski				
			mgr inż. Maciej Malinowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=2231						
	Moodle ID: 2231 Mosty i Tunele II https://enauczanie.pg.edu.pl/2025/course/view.php?id=2231						
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	15		1.0		9.0	25
Subject objectives	The aim of the course is to familiarize students with a specific group of bridge structures made of both steel and concrete. In particular, the course will present beam and slab concrete structures, as well as structures made of precast concrete elements. The lectures on steel bridges will mainly cover small and medium-sized bridges, as well as pedestrian footbridge structures.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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.	Nie dotyczy	[SK3] Ocena umiejętności organizacji pracy
	[K6_U06] Conduct engineering activities in civil engineering subject area, using and applying practical knowledge and understanding of materials, equipment and tools, processes and technologies.	The student is able to identify the type of bridge structure and present the main actions affecting it, including long-term and short-term loads. The student is also able to assess whether the given structure is dynamically sensitive. The student is able to identify the static schemes of bridge structures. The student can determine the tools necessary to calculate internal forces in various types of structures.	[SU4] Ocena umiejętności korzystania z metod i narzędzi
	[K6_W07] Understand the investment's impact on the environment and the interrelationships and dependencies between the building structure and the natural environment	Nie istotne	[SW2] Ocena wiedzy zawartej w prezentacji
	[K6_W06] Demonstrates practical knowledge and understanding of materials, devices and tools, processes and technologies in the field of civil engineering (and their limitations).	Knowledge in the design of concrete bridge structures and small steel bridges.	[SW2] Ocena wiedzy zawartej w prezentacji
	[K6_U07] Design and build engineering structures in a sustainable manner, with care for the natural environment and a minimum carbon footprint	Nie dotyczy	[SU3] Ocena umiejętności wykorzystania wiedzy uzyskanej w ramach przedmiotu
Subject contents	Course content – lecture Lectures on Concrete Structures Cover slab and beam bridges, as well as bridge supports, including abutments and piers. Lectures on Steel Bridges Cover plate girder structures and small-span bridges with orthotropic decks; truss structures; composite structures, including prefabricated composite girders; and methods for connecting steelconcrete composite structures.		
Prerequisites and co-requisites	Has knowledge of calculation procedures for steel and concrete cross-sections. Is familiar with methods of determining internal forces using analytical approaches and basic engineering software for the analysis of frame and beam (3D) structures.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	100.0%
Recommended reading	Basic literature	1) Szczygieł J.: Mosty z betonu zbrojonego i sprężonego WKiŁ, Warszawa 1978 2) Leonhardt F.: Budowa mostów. WKiŁ, Warszawa 1982. 3) Madaj A., Wołowicki W.: Mosty betonowe. WKiŁ, Warszawa 1998. 4) Madaj A., Wołowicki W.: Budowa i utrzymanie mostów. WKiŁ, Warszawa 1995 5) Franciszek Szelągowski Mosty metalowe część I i II WKiŁ, Warszawa 1966 6) Ryżyński A i inni Mosty Stalowe, PWN Warszawa-Poznań 1984	
	Supplementary literature	1) Jan Kmita.: Mosty betonowe Cz. I. Podstawy wymiarowania. WKiŁ, Warszawa 1984. 2) Jan Kmita.: Mosty betonowe Cz. II. Podstawy kształtowania. WKiŁ, Warszawa 1984. 3) Głomb J.: Technologia budowy mostów betonowych. WKiŁ, Warszawa 1982. 4) Czerski Z., Pajchel W.: Mosty Żelbetowe. WKiŁ, Warszawa 1969. 5) Czudek H., Radomski W.: Podstawy mostownictwa. PWN, Warszawa 1983.	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Within the scope of the course, students complete a design project of a composite steelconcrete bridge.		

Practical activities within the subject	Not applicable
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