



Subject card

Subject name and code	, PG_00069211						
Field of study	Civil Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2026/2027		
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		5.0		
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. Natalia Korcz-Konkol				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=1138						
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	45		10.0		70.0	125
Subject objectives	Aim of the course is to provide students with both theoretical and practical knowledge about selected issues related to the production, design and assemble proccess of modern building cladding and facade systems, in particular lightweight cladding systems and glass-metal facades.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K04] Engages in independent lifelong learning and individually follows the development of science and technology in the field of civil engineering.		Student independently expands his or her knowledge and develops skills in the production, design and assemble proccess of building claddings and facade systems.		[SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness [SK2] Assessment of progress of work		
	[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.		Student is able to apply their knowledge and acquired skills in practice, solving engineering problems related to modern building cladding and facade systems. Student presents the results of their work in the form of a written or graphical report. Student collaborates with other students to solve a given engineering problem. Student is able to discuss the completed task with other co-workers and with the person verifying the correctness of the work, and provide arguments and support for their solution.		[SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness [SK2] Assessment of progress of work [SK1] Assessment of group work skills		

Subject contents	Course content – lecture Roof coverings. Corrugated sheets. Sandwich panel cladding. Glass and metal facades. Facade glass. Ventilated facades.		
	Course content – exercises Roof coverings. Corrugated sheets. Sandwich panel cladding. Glass and metal facades. Facade glass. Ventilated facades.		
	Two exercise tasks:		
	a. Exercise No. 1: Sandwich panel wall cladding. b. Exercise No. 2: Glass-metal façade.		
Prerequisites and co-requisites	Basic knowledge of steel and reinforced concrete 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. Biegus A.: <i>Stalowe budynki halowe</i> . Arkady, Warszawa 2006 2. Łubiński M., Żółtowski W.: <i>Konstrukcje metalowe. Część 2</i> . Arkady, Warszawa 2000 3. Gwóźdź M.: <i>Konstrukcje szklane i aluminiowo-szklane</i> , Wyd. Politechniki Krakowskiej, Kraków 2020 4. PN-EN 1993-1-3 <i>Eurokod 3: Projektowanie konstrukcji stalowych. Część 1-3: Reguły ogólne. Reguły uzupełniające dla konstrukcji z kształowników i blach profilowanych na zimno</i> . 5. PN-EN 1999-1-1 <i>Eurokod 9: Projektowanie konstrukcji aluminiowych. Część 1-1: Reguły ogólne</i> .	
	Supplementary literature	1. Praca zbiorowa pod red. A. Kozłowskiego: <i>Konstrukcje stalowe. Przykłady obliczeń według PN-EN 1993-1. Część trzecia. Hale i wiaty</i> . Oficyna Wydawnicza PRZ, Rzeszów 2015 2. Bródka J., Garncarek R., Miłaczewski K.: <i>Blachy fałdowe w budownictwie stalowym</i> . Arkady, Warszawa 1999 3. Gwóźdź M., Suchodoła M.: <i>Obliczenia konstrukcji aluminiowych wg Eurokodu 9</i> . Wyd. Politechniki Krakowskiej, Kraków 2015	
	eResources addresses		
Example issues/ example questions/ tasks being completed	1. Selection of a structural solution depending on the type of opening in a trapezoidal sheet roof. 2. Static calculations for a typical roof opening for a skylight dome and design of structural elements and connections. 3. Detailed design of a sandwich panel façade. 4. Design of a glass-metal façade.		
Practical activities within the subject	Not applicable		

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