



Subject card

Subject name and code	Construction Project III, PG_00061531						
Field of study	Architecture						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		English		
Semester of study	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Building Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	45.0	0.0	45
	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	45		5.0		25.0	75
Subject objectives	The aim of the course is to design the main structural members of the building and to prepare technical drawings. Moreover, the execution of details of the architectural object.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W01] knows and understands construction problems, building and engineering issues related to building design; principles, solutions, constructions and building materials used in simple engineering tasks in the field of architectural and urban design		Knows and understands the issues of construction, including key issues in architectural design; has knowledge of technical issues related to the design and construction of architectural structures, and has basic knowledge of related engineering disciplines; is able to select the profiles of the main load-bearing structural member of the structure and propose their connections based on the basics of designing steel structures and their connections.		[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation		
	[K6_U04] is able to use analytical methods to formulate and solve project tasks		is able to prepare architectural and construction documentation at appropriate scales in relation to the conceptual architectural design; is able to use analytical methods to formulate and solve design tasks		[SU4] Assessment of ability to use methods and tools		

Subject contents	Course content – project 1.Collection of loads acting on structures (characteristic and design values). 2. Determination of load combinations. 3. Verification of the Ultimate Limit State for the following steel elements: - subjected to bending (girder, beam), - subjected to compression (column). 4. Serviceability Limit State for the following steel elements: - subjected to bending (girder, beam), - subjected to compression (column). 5. Preparation of a construction drawing. 6. Preparation of details of the foundation, wall, floor and roof.		
Prerequisites and co-requisites	Before starting the course, student should complete the following subjects: - General Mechanics, - General Building Technology. Student should know the basics of structural mechanics and be able to distinguish different types of structural members. Moreover he can adopt the structural system of the building.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Technical drawings	60.0%	50.0%
	design project	60.0%	50.0%

Recommended reading	Basic literature	1. PN - EN 1991 - 1 - 3:2003 Eurokod 1. Oddziaływania na konstrukcję. Część 1 - 3: Oddziaływania ogólne - Obciążenie śniegiem. 2. PN - EN 1991 - 1 - 4:2008 Eurokod 1. Oddziaływania na konstrukcję. Część 1 - 4: Oddziaływania ogólne - Oddziaływania wiatru. 3. PN - EN 1990 - 1 Eurokod - Podstawy projektowania konstrukcji. 4. PN-EN 1993-1-1 Eurocode 3: Design of steel structures. Part 1-1: General rules and rules for buildings 5. Praca zbiorowa: Budownictwo ogólne. Tom 5, Arkady, Warszawa 2010 2. Łubiński M., Filipowicz A., Żółtowski W.: Konstrukcje stalowe. Część 1. Arkady, Warszawa 2000. 6. Rykaluk K.: Konstrukcje stalowe. Dolnośląskie Wydawnictwo Pedagogiczne, Wrocław 2001. 7. Praca zbiorowa pod red. A. Kozłowskiego: Konstrukcje stalowe. Przykłady obliczeń według PN-EN 1993-1. Część pierwsza. Wybrane elementy i połączenia, Oficyna Wydawnicza PRz, Rzeszów 2009 6. 8. PN-EN 1993-1-8 Eurocode 3: Design of steel structures. Part 1-8: Design of joints.
	Supplementary literature	1. Praca zbiorowa pod red. A. Kozłowskiego: Konstrukcje stalowe. Przykłady obliczeń według PN-EN 1993-1. Część druga. Stropy i pomosty, Oficyna Wydawnicza PRz, Rzeszów 2011. 2. Goczek J., Supel Ł., Gajdzicki M.: Przykłady obliczeń konstrukcji stalowych, Wydawnictwo PŁ, Łódź 2010
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Based on the given values of internal forces, determine the cross-section of the beam subjected to bending. 2. Find the design and characteristic value of the loads acting on the floor beam. 3. List the main structural elements of the roofing system supported on steel beams. 4. Draw, in cross-section, the layout of the roof layers of the insulated steel hall.	
Practical activities within the subject	Not applicable	

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