GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Construction Project III, PG_00061531		
Field of study	Architecture		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2025/2026
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 -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor		
	Teachers		

Lesson types and methods of instruction

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	Student 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.	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
[K6_U04] is able to use analytical methods to formulate and solve project tasks	is able to use analytical methods to formulate and solve design tasks	[SU4] Assessment of ability to use methods and tools

Subject contents	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 Technolgy. 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
design project	60.0%	50.0%
Technical drawings	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 konstrukcje. 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 metalowe. 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., Supeł Ł., Gajdzicki M.:Przykłady obliczeń konstrukcji stalowych, Wydawnictwo PŁ, Łódź 2010
	eResources addresses	Adresy na platformie eNauczanie:
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.	
Work placement	Not applicable	

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