GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Concrete Structures III - Project, PG_00069281		
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	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. Małgorzata Lachowicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	15.0	0.0	15

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	15	0.0	0.0	15

Subject objectives

Student umie zaprojektować płytę zginaną dwukierunkowo oraz słup zginany dwukierunkowo wraz z wykonaniem rysunków zbrojeniowych.

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.	The student makes independent design decisions and selects optimal construction solutions.	[SK5] Assessment of ability to solve problems that arise in practice
[K6_W06] Demonstrates practical knowledge and understanding of materials, devices and tools, processes and technologies in the field of civil engineering (and their limitations).	The student is able to prepare a reinforcement drawing for a designed reinforced concrete element.	[SW3] Assessment of knowledge contained in written work and projects
[K6_W07] Understand the investment's impact on the environment and the interrelationships and dependencies between the building structure and the natural environment	The student is able to design a reinforced concrete element working in two directions in accordance with the guidelines of design standards.	[SW3] Assessment of knowledge contained in written work and projects
[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 has the ability to use computer programs and estimate the correctness of the obtained results.	[SU4] Assessment of ability to use methods and tools
[K6_U07] Design and build engineering structures in a sustainable manner, with care for the natural environment and a minimum carbon footprint	The student is able to design a reinforced concrete element working in two directions by economically selecting concrete cross-sections and reinforcement.	[SU4] Assessment of ability to use methods and tools

Subject contents	Course content – project Presentation of the principles of determining internal forces using the table method for single- and multi-field cross-reinforced slabs. Compare the obtained results with computer methods. Present issues relevant to the design and shaping of reinforcement in slabs supported by beams operating in two directions. Understand the principles of load transfer from cross-reinforced slabs to supporting beams. Present procedures for determining the load-bearing capacity of reinforced concrete columns and the principles of calculating elements subjected to biaxial eccentric compression.	
Prerequisites and co-requisites	The student is able to design bending cross-sections working in one direction and unidirectional reinforced concrete elements under eccentric compression.	
Assessment methods and criteria	Subject passing criteria: —	Passing threshold: 60.0% — Percentage of the final grade: 100.0%
Recommended reading	Basic literature	J. Kobiak, W. Stachurski, Konstrukcje żelbetowe. Arkady, Warszawa 1987. (możliwe inne wydania). M. Knauff, Obliczanie konstrukcji żelbetowych według Eurokodu 2. PWN, Warszawa 2012. M. Knauff i inni,, Tablice i wzory do projektowania konstrukcji żelbetowych z przykładami obliczeń. PWN, Warsawa 2013. J. Pędziwiatr, Projektowanie słupów żelbetowych. PWN, Warszawa 2019. A. Łapko, B. Ch. Jensen, Podstawy projektowania i algorytmy obliczeń konstrukcji żelbetowych. Arkady, Warszawa 2006. W. Starosolski.Konstrukcje żelbetowe według Eurokodu 2 i norm związanych. PWN, Warszawa 2011. Konstrukcje żelbetowe : atlas rysunków / red. nauk. Adam Zybura ; [aut. Katarzyna Domagała et al.]. PWN, Warszawa 2009.
	Supplementary literature	Podstawy projektowania konstrukcji żelbetowych i sprężonych według Eurokodu 2, praca zbiorowa. Dolnośląskie Wydawnictwo Edukacyjne, Wrocław 2006.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Practical activites within the subject	Not applicable	

Document generated electronically. Does not require a seal or signature.