GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Construction Project II, PG_00055847		
Field of study	Architecture		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
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	Polish
Semester of study	5	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Technical Fundamentals of Architecture Design -> Faculty of Architecture		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Karol Grębowski	
	Teachers	dr inż. arch. Marek Sztafrowski dr inż. Karol Grębowski	

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 student recognizes the basic problems in the field of solving problems related to building structures on the basis of EC 1 to 6.Presents knowledge on the adoption of material solutions, determination of the location of structural axes, distribution of the column / wall grid, assumption of initial dimensions of the foundations, calculation of the initial dimensions of the floor slab columns, ribs, binder according to the adopted material, determination of the ceiling support directions (unidirectional / bidirectional)

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U04] is able to use analytical methods to formulate and solve project tasks	prepares, based on the author's design concept, basic elements of architectural and construction documentation, skillfully applies construction solutions, designs basic construction elements, selects materials and construction products depending on their type and properties	[SU3] Assessment of ability to use knowledge gained from the subject
[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	has knowledge of technical issues related to the design and implementation of architectural structures and basic knowledge of related engineering industries	[SW3] Assessment of knowledge contained in written work and projects

Subject contents	Preparation of a structural designTechnical and construction descriptionDrawing K-01: Foundation plan, scale 1:50 or 1: 100Drawing K-02: Garage / basement plan scale 1:50 or 1: 100Drawing K-03: Ground floor plan, scale 1:50 or 1: 100Drawing K-04: Typical floor plan, scale 1:50 or 1: 100Drawing K-05: Roof plan, scale 1:50 or 1: 100Drawing K-06: Building cross-section scale 1:50 or 1: 100Based on knowledge of:- accepting material solutions - determining the position of structural axes - arranging the grid of columns / walls - adopting the initial dimensions of strip footings - adopting the initial dimensions of strip footings - taking the initial dimensions of walls - marking ceiling rims - marking door and window lintels - calculating the initial dimensions of columns according to the adopted material - calculating the initial dimensions of the ceiling slab according to the adopted material - calculating the preliminary dimensions of the ceiling rib according to the adopted material - calculating the initial dimensions of the ceiling joist according to the adopted material - determining the directions of the ceiling support (one-way / two-way) + rules of technical drawing (line thickness, font size, etc.) Design of building elements- Issues in the field of construction related to the implementation of a construction design in the technical part (projections and cross-sections), and solution of a construction detail of a selected part of the building containing 3-4 nodes depending on the individual situation (e.g. glass facade, facade, roof, roof glazing, skylights) , stairs, etc.) in the scale of the detail. The basis of the study is your own architectural conceptual design made during classes in architectural design.
Prerequisites and co-requisites	

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	60.0%	100.0%

Recommended reading

Basic literature	Eurocode 0: Design of structuresEurocode 1: Actions on structuresEurocode 2: Design of reinforced concrete structuresEurocode 3: Design of steel structuresEurocode 5: Design of wooden structuresEurocode 6: Design of masonry structuresPN-B-01040 Building construction drawing. General rulesHoła J., Pietraszek P., Schabowicz K .: Calculation of traditionally erected buildings, Dolnośląskie Wydawnictwo Edukacyjne, Wrocław 2006.Starosolski W., Reinforced concrete structures, volumes I, II and III, Polish Scientific Publishers PWN, Warsaw 2007.Łapko A .: Designing reinforced concrete structures, Arkady, Warsaw 2001.Łapko A., Jensen B. Ch .: Design basics and algorithms for calculating reinforced concrete structures, Arkady, Warsaw 2005.Knauff M., Calculation of reinforced concrete structures according to Eurocode 2, PWN, Warsaw 2012, 2015; Panas J. ed., New construction foreman's guide, Arkady 2012.Żenczykowski W., General construction, Warsaw, Arkady, 1986.Różycki S., General construction 3-4, Gdańsk 1966General construction, T 1 Building materials and products, Warsaw Arkady, 2007General construction, T 3 Building elements. Fundamentals of Design, Warsaw Arkady, 2008General construction, T 4 Construction of buildings, Warsaw Arkady, 2014Ordinance of the Minister of Infrastructure of April 12, 2002 on technical conditions to be met by buildings and their location, i.e. Journal of Laws No. 2019 item 1065Regulation of the Minister of Transport, Construction and Maritime Economy on the detailed scope and form of a construction project, Journal of Laws No. 2020 item 1609
Supplementary literature	1. Borusiewicz W. Building structures for architects, Arkady, Warsaw 1973.2. Mielczarek Z. Modern structures in general construction, Arkady, Warsaw 2001.3. Michalak H. Multi-station garages. Design and implementation, Arkady, Warsaw 2009. P. Hyks, M. Gaborik, O. Vrana, Stairs, Arkady 1984Markiewicz Przemysław, General construction for architects, ArchiPlus 2011 (4th ed.)Markiewicz Przemysław, Design details for architects, ArchiPlus2010 (1st edition)
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable