



Subject card

Subject name and code		Construction Project III, PG_00052808						
Field of study		Architecture						
Date of commencement of studies		October 2020		Academic year of realisation of subject		2022/2023		
Education level		first-cycle studies		Subject group		Obligatory subject group in the field of study 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. Karol Grębowski dr inż. arch. Marek Szafrowski dr inż. Monika Zielińska				
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	6.0		24.0	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_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				[SW3] Assessment of knowledge contained in written work and projects		
		[K6_U02] is able to design an architectural object or a simple urban complex that meets the aesthetic and technical requirements				[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task		

Subject contents	<p>Preparation of a structural design            Technical and construction description            Drawing K-01: Foundation plan, scale 1:50 or 1: 100            Drawing K-02: Garage / basement plan scale 1:50 or 1: 100            Drawing K-03: Ground floor plan, scale 1:50 or 1: 100            Drawing K-04: Typical floor plan, scale 1:50 or 1: 100            Drawing K-05: Roof plan, scale 1:50 or 1: 100            Drawing K-06: Building cross-section scale 1:50 or 1: 100            Based 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.)</p> <p>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.</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
Recommended reading	Basic literature	<p>Eurocode 0: Design of structures            Eurocode 1: Actions on structures            Eurocode 2: Design of reinforced concrete structures            Eurocode 3: Design of steel structures            Eurocode 5: Design of wooden structures            Eurocode 6: Design of masonry structures            PN-B-01040 Building construction drawing. General rules            Hoła 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;</p> <p>Panas J. ed., New construction foreman's guide, Arkady 2012.            Żenczykowski W., General construction, Warsaw, Arkady, 1986.            Różycki S., General construction 3-4, Gdańsk 1966            General construction, T 1 Building materials and products, Warsaw Arkady, 2007            General construction, T 3 Building elements. Fundamentals of Design, Warsaw Arkady, 2008            General construction, T 4 Construction of buildings, Warsaw Arkady, 2014            Ordinance 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 1065            Regulation 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</p>	
	Supplementary literature	<p>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> <p>P. Hyks, M. Gaborik, O. Vrana, Stairs, Arkady 1984            Markiewicz Przemysław, General construction for architects, ArchiPlus 2011 (4th ed.)            Markiewicz Przemysław, Design details for architects, ArchiPlus 2010 (1st edition)</p>	
	eResources addresses	Adresy na platformie eNauczanie:	

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