



Subject card

Subject name and code	Building Structures and Technologies for Architects, PG_00057075						
Field of study	Architecture						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
Education level	second-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	1	Language of instruction			Polish		
Semester of study	1	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. arch. Stefan Niewitecki					
	Teachers	dr inż. arch. Stefan Niewitecki					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	0.0	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	Applied introduction with constructional systems students in Polish building and foreign. The realization by students of chosen of constructional formations and study their in of project conception supported form the calculations and the examples of realization.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W05] knows and understands issues related to architecture and urban planning in the context of the multi-discipline nature of architectural and urban design as well as the need to cooperate with other specialists; legal provisions and procedures necessary for the implementation of building designs and the integration of buildings with the overall planning project	he meeting and the understanding of problems relating the constructional systems in context of many-department character the architectural the as well as need projecting of co-operation with constructors			[SW1] Assessment of factual knowledge		
	[K7_W01] knows and understands construction, building and engineering issues related to building design; principles, solutions, constructions and building materials used in performing complex engineering tasks in the field of architectural and urban design	t knows the solution of constructional problems, connected from projecting the buildings the and building; applied the principal, constructional solutions, in range of possibility of use concrete building materials, near executing of folded building projects			[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	<p>1. Compressed reinforced concrete prefabricated ceiling;2. Compressed reinforced concrete monolithic ceiling (np. Freyssinet);3. Combined ceiling: reinforced concrete plate on steel beams 4. Flat ceiling, coffered, ceiling Cobiax;5. Reinforced concrete ceiling "traditional plytowo - beam 6. Beam roof stuck wood; 7. Grid roof steel;8. Reinforced concretes compressed girders;9. Structure - spatial grates;10. Steel grill or from stuck wood;11. Roof bending string12. Hung roof;13. Thin-walled roofing;14. Polish examples and foreign</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	evaluation of the semester project	51.0%	100.0%
Recommended reading	Basic literature	<p>[1] Ajdukiewicz A., Starosolski W.: Reinforced concretes systems plytowo - post., Arcade, Warsaw 1981. 2] Foster N.: The Modeling the the the Swiss the Re of Tower. ArchitectureWeek, 5/2005.[3] Kobiak J., Stachurski W.: Reinforced concretes constructions. Volume And - III. Arcade. Warsaw 1984-1989. [4] Mielczarek Z.: Modern constructions in general building. Arcade, Warsaw 2005. [[5] the Pawłowski the A. Z., Whole I.: high Buildings. Publishing Annexe of Varsovian Engineering college, Warsaw 2006. [6] collective Work: Concrete building. Volume of V: Armature, deskowanie and form to concrete. Under direction W. Danileckiegoo.[7] collective Work: Concrete building. Volume VII: General questions of prefabrication. Under red. the T. Kluza of, Arcade, Warsaw 1972. [8] collective Work: Concrete building. Volume IX: Foundations. Under direction the B. Rosińskiego of, Arcade, Warsaw 1966. [9] collective Work: Concrete building. Volume X: Municipal buildings. Under direction the J. Nechaya of, Arcade, Warsaw 1964. [10] collective Work: General building. Volume III: Units of buildings. Basis of projecting. Under direction the L. Lichołai of, Arcade, Warsaw 2008.</p>	

	Supplementary literature	<p>[11] collective Work: Engineer's guide and building technician. Volume 1-6. Arcade, Warsaw 1977-1986. [12] Structural Systems for Tall Buildings. McGraw - Hill, Inc., New York 1995. Council he Tall Buildings and Urban Habitat, Tall Buildings and Urban Environment Series, Vol. 10, ed. R. M. Kowalczyk, R. Sinn, M. Kilmister.[13] the Systems of Housing Building and General In -70, Szczeciński, SBO, SBM -75, WUF - the T, OWT -67, WWP. The work under editing the scientific E. Piliszka of, Arcade, Warsaw 1974. [14] Żenczykowski W.: General building. Volume III, Arcade, Warsaw 1967 and 1990. List of legal acts [1]. The decree of Minister of Administration, Field Economy and the Protection of Environment with day 3 July 1980r. buildings in matter of technical conditions with what should answer (DZIENNIK USTAW No. 17 with day 3 July 1980 r.)[2]. The decree of Minister of Spatial Economy and the Buildings with day 14 December 1994 r. in matter of technical conditions with what should answer the buildings and their location ( the DZIENNIK the USTAW No. 10 with day 8 February 1995 r.)[3]. The announcement of Minister of Internal Matters and the buildings should answer with day the Administration 4 February 1999 r. in matter of technical conditions what and their location ( the DZIENNIK the USTAW No. 15 with day 25 February 1999 r.). [4]. The buildings should answer with day the decree of Minister of Infrastructure 12 April 2002 r., in matter of technical conditions, what and their location together with with enclosures ( the DZIENNIK USTAW of No. 75, poz. 690 the, change: the DZ. U. Nr 33, poz. 270 with 2003 year, the DZ. U. Nr 109, poz. 1156 with 2004 year as well as the DZ. the U. No. 56 with day 12 March 2009 r.). [5]. The decree of Minister of Infrastructure And the Building with day 14 November 2017 r. the altering decree in matter of technical conditions, with what the buildings should answer and their location (Warsaw, day 8 December 2017 r. of Poses. 2285).Standard 1. PN -82 / B -02001 "Solid duties." 2. PN -82 / B -02003 "Basic technological duties and assembly" 3. PN -82 / B -02004 "Duty vehicles." 4. PN -80 / B -02010 "Duty snow." 5. PN -77 / B -02011 "Duty wind. " 6. PN -91 / B -02020 "Thermal protection of buildings." 7. PN -84 / B -03264 "Concrete constructions, ferro - concrete. and compress." 8. PN -87 / B -03002 "Murowe constructions." 9. PN -81 / B -03020 "Direct Posadowienie of building." 10. PN -83 / B -03010 " resistory Walls - static calculation and projecting11. PN -85 / B -02361 "Roof falls. " 12. PN -73 / B -03150 " wooden Constructions" 13. PN -81 / B -03150.01.02.03. " Wooden Constructions"</p>
	eResources addresses	Adresy na platformie eNauczenie: SYSTEMY KONSTRUKCYJNE - Zimowy 2023/2024 - Moodle ID: 19816 <a href="https://enauczenie.pg.edu.pl/moodle/course/view.php?id=19816">https://enauczenie.pg.edu.pl/moodle/course/view.php?id=19816</a>
Example issues/ example questions/ tasks being completed	<p>assignment paperSubject: For spread L = 18m introduce for one subject the solution of construction according to attributed number.Content: the title side + 4 the charts of format A3 ( the index card) creator coherent the whole ( the max the quantity of own drawings, diagrams, only picture with descriptions, the dimensions, min. of text);the chart No. 1 the description of solutions, typology, systematics;chart No. 2 project foundations, sposobić passing on duties (statics);the chart No. 3 the preliminary choosing the transverse section the, dimensions, the examples of, dependence, the location the otworowań the,, technological material solutions;the chart No. 4 the recapitulation + the examples of realization ( the survey from marking the spread, main dimensions and different data);</p>	
Work placement	Not applicable	