



Subject card

Subject name and code	Modern Wooden Structures, PG_00044225						
Field of study	Civil Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2023/2024		
Education level	first-cycle studies	Subject group			Optional 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			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Building Structures and Material Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Jerzy Bobiński					
	Teachers	dr hab. inż. Jerzy Bobiński mgr inż. Benjamin Kondys					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	0.0	30
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	30	5.0		40.0	75	
Subject objectives	Provide students with the knowledge necessary to design simple wooden structures						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U06] can design steel, concrete (including reinforced), wood and masonry constructions and its elements	The student can design selected elements and typical metal, reinforced concrete, composite, wooden and brick structures.					
	[K6_U04] can correctly choose tools (analytical or numerical) to solve engineering problems in design of structures or construction process	The student is able to correctly select the tools (analytical or numerical) to solve engineering problems in the design of building structures or conducting construction works.					
	[K6_W09] knows the principles of determining of loads acting on basic constructions (e.g. general, industrial, bridge, water, marine, transport objects) and rules of its constructing	The student knows the rules for determining the loads on selected buildings (general, industrial, bridge, water, sea or communication) and the rules of their construction.					
	[K6_U07] Can design and properly dimension basic elements of construction or basic foundations of general, hydrotechnical and bridge constructions	The student is able to design / dimension basic structural elements or typical foundations in general, hydrotechnical and bridge construction facilities.					
	[K6_W12] Has basic knowledge on building physics, including heat and moisture migration in buildings, acoustics and energy demand	The student knows the basics of building physics regarding the migration of heat and moisture in buildings, their acoustics and determining the energy demand of buildings.					
Subject contents	Wood as a building material. Ecological aspects of using wood. Wood species, production sawn timber, sawn defects, sawn timber assortment, wood sorting and strength classes. Materials wood-based. Protection of wood against fire, biological corrosion and insects. Structural elements z glued wood. Fasteners in wooden structures. Designing connections. Ceiling trusses i roofing. Systems and technologies used in wooden structures (mullion-transom structures and skeletal).						

Prerequisites and co-requisites	Completion of the General Construction course.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written credit	60.0%	40.0%
	Term work	60.0%	60.0%
Recommended reading	Basic literature	1. Michalak H., Pyrak S., Domy jednorodzinne konstruowanie i obliczenia: Arkady 2005. 2. Mielczarek Z.: Budownictwo drewniane. Warszawa: Arkady 1994. 3. Matyskiewicz J.: Konstrukcja budynków w szkieletcie drewnianym. Gdańsk: Amerykańsko-Polski Instytut Budownictwa 1995. 4. Wajdzik Cz.: Więźby dachowe. Wrocław: Wydawnictwo Akademii Rolniczej we Wrocławiu 2000. 5. Miedziałowski Cz., Malesza M.: Budynki o szkieletcie drewnianym z poszyciem. Warszawa-Białystok 2006. 6. Nożyński W.: Przykłady obliczeń konstrukcji budowlanych z drewna. Warszawa: Wydawnictwa Szkolne i Pedagogiczne Spółka Akcyjna 1994. 7. Byrda Cz.: Dachy i stropodachy ocieplone i nieocieplane. Kraków: Politechnika Krakowska 2003. 8. Kotwica J.: Konstrukcje drewniane w budownictwie tradycyjnym. Warszawa: Arkady 2004. 9. Neuhaus H.: Budownictwo drewniane. Rzeszów: Polskie Wydawnictwo Techniczne 2004.	
	Supplementary literature	1. Praca zbiorowa: Poradnik majstra budowlanego. Warszawa: Arkady 1985. 2. Praca zbiorowa: Poradnik inżyniera i technika budowlanego, t. V. Warszawa: Arkady 1986. 3. Żenczykowski W.: Budownictwo ogólne, t. 2/1. Warszawa: Arkady 1990 4. Ważny J., Karyś J.: Ochrona budynków przed korozją biologiczną. Warszawa: Arkady 2001.	
	eResources addresses	Adresy na platformie eNauczanie: Konstrukcje Drewniane sem. VII inż. stacj. 2023/2024 - Moodle ID: 33836 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33836	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		