



Subject card

Subject name and code	Steel Structures II, PG_00044198									
Field of study	Civil Engineering									
Date of commencement of studies	October 2021	Academic year of realisation of subject		2023/2024						
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	6	ECTS credits		2.0						
Learning profile	general academic profile	Assessment form		exam						
Conducting unit	Faculty of Civil and Environmental Engineering									
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Aleksander Perliński							
	Teachers		dr inż. Aleksander Perliński dr inż. Dariusz Kowalski dr inż. Witold Knabe							
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM			
	Number of study hours	30.0	0.0	0.0	0.0	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		7.0		13.0	50			
Subject objectives	Presentation of the topics related to the design, manufacturing, construction, fire and anticorrosion protection of the steel building structures.									
Learning outcomes	Course outcome		Subject outcome		Method of verification					
	[K6_W06] knows the rules of constructing and dimensioning of building elements of: steel, reinforced concrete, wood, masonry.		Knows principles of steel members design related to purlins, trusses, columns and bracings		[SW1] Assessment of factual knowledge					
	[K6_U07] Can design and properly dimension basic elements of construction or basic foundations of general, hydrotechnical and bridge constructions		Can design simple steel structural members like purlins, trusses, columns and bracings		[SU3] Assessment of ability to use knowledge gained from the subject					
Subject contents	Lectures: Truss girders. Steel halls - structural system, loads, structural solutions. Hall bracings. Cladding - materials and solutions. Composite steel-concrete structures. Fabrication of steel structures. Corrosion and anticorrosion protection. Fire protection. Assembly of steel halls. Overview of steel structures - tall buildings, masts, towers, chimneys, tanks, silos and pipelines.									
Prerequisites and co-requisites										
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade					
	written lecture examination		60.0%		100.0%					

Recommended reading	<p>Basic literature</p>	<ol style="list-style-type: none"> 1. Praca zbiorowa pod red. A. Kozłowskiego: <i>Konstrukcje stalowe. Przykłady obliczeń według PN-EN 1993-1. Część pierwsza. Wybrane elementy i połączenia.</i> Oficyna Wydawnicza PRz, Rzeszów 2009. 2. Praca zbiorowa pod red. A. Kozłowskiego: <i>Konstrukcje stalowe. Przykłady obliczeń według PN-EN 1993-1. Część druga. Stropy i pomosty.</i> Oficyna Wydawnicza PRz, Rzeszów 2011. 3. Goczek J., Supel Ł., Gajdzicki M.: <i>Przykłady obliczeń konstrukcji stalowych,</i> Wydawnictwo PŁ, Łódź 2010. 4. Bródka J., Broniewicz M.: <i>Projektowanie konstrukcji stalowych według Eurokodów. Materiały szkoleniowe.</i> Polskie Wydawnictwo Techniczne, Rzeszów 2010. 5. Rykaluk K.: <i>Konstrukcje stalowe. Podstawy i elementy.</i> DWE, Wrocław 2001. 6. PN-EN 1993-1-1 <i>Eurocode 3: Design of steel structures. Part 1-1: General rules and the rules for buildings</i> 7. PN-EN 1993-1-1 <i>Eurocode 3: Design of steel structures. Part 1-8: Design of joints</i>
Supplementary literature		<ol style="list-style-type: none"> 1. Bogucki W., Żyburtowicz M.: <i>Tablice do projektowania konstrukcji metalowych.</i> Arkady, Warszawa 2007. 2. Bogucki W.: <i>Budownictwo stalowe.</i> Arkady, Warszawa 1976. 3. W. Knabe: <i>Przykłady obliczeń połączeń śrubowych i spawanych.</i> Wydawnictwo Politechniki Gdańskiej. Gdańsk 2000.
eResources addresses		Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	<p>Examination questions (example):</p> <ol style="list-style-type: none"> 1. Draw the pin joint between a truss girder and a column. 2. Explain the influence of A/V (U/A) parameter on the steel member temperature increase during fire. 	
Work placement	Not applicable	