



Subject card

Subject name and code	Thesis Seminar , PG_00041398						
Field of study	Civil Engineering						
Date of commencement of studies	February 2025	Academic year of realisation of subject			2025/2026		
Education level	second-cycle studies	Subject group			Optional subject group		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Railway Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Eligiusz Mieloszyk				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	45.0	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 aim of subject is to learn about modern solutions in the range of railroads' construction, design and building on the basis of source material study.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K7_U09] is able to design railway tracks of complex geometry on sections and stations, both newly designed and renovated; can make a plan and perform diagnostic of railway track and to interpret its results, propose conclusions; can evaluate durability and reliability of railroad elements		the student can design the complex track geometric systems of railway lines and stations, newly built as well as modernized, he can schedule and perform the diagnostic tests in the range of railway roads				
	[K7_K01] is aware of necessity of professional competences improvement; obeys the professional ethics code		the student is conscious of the necessity of improving the competences and skills, the student enhances the knowledge regarding modern processes and new technologies in the field of railways, the student follows the rules of professional ethics				
	[K7_K02] Recognizes the significance of knowledge in solving cognitive and practical problems; reliably evaluates results of his own and team research		the student can be responsible for reliability of the obtained results and can perform the assessment of his team				
	[K7_W08] has deep knowledge of railway track construction, including high speed railroads; design and renovation of railroads of complex geometry; has detailed knowledge about diagnostics of railroads, knows basics of railway traffic organisation and control		the student has a structured and theoretical knowledge with the railways' construction and design of complex track geometric systems on railway lines and stations				

Subject contents	Speech of students on the following topics: 1) Characteristics of high-speed rail line (Japan, Germany, France and Italy - and other European countries, including Poland); 2) Construction of the ballastless track structure used in European and Japanese railways; 3) Fastening systems used in Europe; 4) Modern construction of the classic turnouts (in terms of the materials used), and of the turnouts with movable frog; 5) Modern tram track structure used in Poland and in Europe; 6) Diagnostic instruments. New types of rail damages. New catalogue of damages.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	presentation	60.0%	40.0%
	performance of the paper	60.0%	60.0%
Recommended reading	Basic literature	1. The articles and conference papers regarding the subject matter of railways. 2. The materials available on the Internet. 3. The materials delivered by lecturer.	
	Supplementary literature	the law concerning the rail infrastructure	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	the thematic area of undertaken questions is very wide		
Work placement	Not applicable		

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