



Subject card

Subject name and code	DIAGNOSTICS AND CONSTRUCTION OF RAILWAYS, PG_00044202						
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		Optional subject group 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		assessment		
Conducting unit	Department of Railway Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Zbigniew Kędra				
	Teachers		mgr inż. Piotr Omieczynski mgr inż. Natalia Karkosińska-Brzozowska dr hab. inż. Piotr Chrostowski dr inż. Roksana Licow				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	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		15.0	50
Subject objectives	The aim of the course is to provide basic knowledge of railway track construction and a field of diagnostics of railway superstructure.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U13] knows principles of constrution of roads and railroads; can design a section of a road and railroad; can evaluate the technical condition of a road and railroad infrastructure		Can describe the structure of the railroad and assess the technical condition of the railway infrastructure				
	[K6_W10] Has basic knowledge on design, construction and maintenance of roads and railroads		Has a basic knowledge of the construction and diagnostics of a railway track				
Subject contents	Introduction to the diagnosis of rail track The construction of the railway track Measurement techniques in railway Research pavement structure and assessment of: the rails and sleepers ballast connectors Condition of the track geometries Assessment of track imperfections						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	colloquium		50.0%		30.0%		
	design classes report		50.0%		70.0%		

Recommended reading	Basic literature	<p>Sławomir Grulkowski, Zbigniew Kędra, Władysław Koc, Mirosław J. Nowakowski, Drogi szynowe, Wydawnictwo Politechniki Gdańskiej, Gdańsk 2013</p> <p>Henryk Bałuch, Diagnostyka Nawierzchni Kolejowej, WKiŁ, Warszawa 1978</p>
	Supplementary literature	Railway industry instructions and regulations
	eResources addresses	<p>Adresy na platformie eNauczanie:</p> <p>Diagnostyka i budowa dróg szynowych 2023/24 - Moodle ID: 35158 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=35158</p>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	