



## Subject card

Subject name and code	, PG_00065916						
Field of study	Civil Engineering						
Date of commencement of studies	October 2022		Academic year of realisation of subject		2024/2025		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study		
Mode of study	Part-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department Of Transportation Engineering -> Faculty Of Civil And Environmental Engineering -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Sławomir Grulkowski				
	Teachers		dr inż. Michał Urbaniak				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	0.0	0.0	10.0	0.0	20
	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	20		0.0		0.0	20
Subject objectives	The aim of the course is to familiarize students with the principles and diagnostic methods for railway infrastructure.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U07] Design and build engineering structures in a sustainable manner, with care for the natural environment and a minimum carbon footprint		Knows the methods of diagnostic analysis. Can perform simple analysis		[SU2] Assessment of ability to analyse information		
	[K6_U03] Design engineering objects and details, processes and engineering systems by applying appropriate standards and methods of design.		The student is able to classify faults and apply appropriate repair technology.		[SU4] Assessment of ability to use methods and tools		
	[K6_W07] Understand the investment's impact on the environment and the interrelationships and dependencies between the building structure and the natural environment		The student is able to make decisions based on the measurements taken.		[SW1] Assessment of factual knowledge		
	[K6_W03] Demonstrate knowledge and understanding of the processes, established standards and design methods in the civil engineering subject area and of their limitations.		The student knows the basic parameters of the railway track that require diagnostics. He knows the tools and methods of measurement		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	The concept of railway track diagnostics. Track geometry diagnostics. Surface element diagnostics. Jointless track diagnostics. Track substructure diagnostics. Diagnostic tools and devices						
Prerequisites and co-requisites	Knowledge of rail transport infrastructure						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Test		50.0%		50.0%		
	tasks to do		50.0%		50.0%		

Recommended reading	Basic literature	Koc Władysław, Grulkowski Sławomir, Kędra Zbigniew, Nowakowski Mirosław J., Railway  Bałuch H., Diagnostics of railway track
	Supplementary literature	Id-8 Railway Surface Diagnostics Instruction
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Reading the diagnostic chart	
Work placement	Not applicable	

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