



Subject card

Subject name and code	Planning and organization of railway works, PG_00062463						
Field of study	Planowanie i organizacja robót kolejowych						
Date of commencement of studies	February 2025		Academic year of realisation of subject		2025/2026		
Education level	second-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Zbigniew Kędra				
	Teachers		dr inż. Kamila Szwackiewicz				
			dr inż. Zbigniew Kędra				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	15.0	0.0	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 the course is to teach students how to plan track works in the field of: costing, organization and scheduling of repairs railway works.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_U02] presents logical and solid arguments regarding the obtained results, through analysis, synthesis of information in various technical contexts, critically approaching their interpretation		It presents logical arguments for the adopted technological and organizational solutions.		[SU5] Ocena umiejętności zaprezentowania wyników realizacji zadania [SU2] Ocena umiejętności analizy informacji		
	[K7_K02] makes competent and ethical decisions, caring for the public interest and maintaining economic, social and environmental values		Makes competent and economical decisions when planning and organizing railway works		[SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce		
	[K7_W01] identifies in an in-depth way phenomena related to the field of study as well as theories describing them and possible methods of analyzing processes occurring in the life cycle of technical systems		Has knowledge in the field of planning and organization of railway works. Has knowledge in the field of technology of construction and repair of railway lines.		[SW1] Ocena wiedzy faktograficznej		

Subject contents	Course content – lecture Characteristics and scope of rail road maintenance. Planning railway works. Bill of quantities. Cost estimation rules for railway works. Types and rules of execution of work schedules. Rules for preparing line schedules. Rules for preparing complex schedules. Technology and organization of railway works. Mechanization of railway works.		
	Elaboration of technology, organization and planning of selected track works (track tamping, ballast cleaning, rail grinding, track and turnout ballasting, material transport, earthworks). Execution of the bill of quantities of railway works. Preparation of cost estimate for railway works. Planning the organization of railway works. Schedule of a repair. Discussion and presentation of the planned repair.		
	Course content – laboratory Elaboration of technology, organization and planning of selected track works (track tamping, ballast cleaning, rail grinding, track and turnout ballasting, material transport, earthworks). Execution of the bill of quantities of railway works. Preparation of cost estimate for railway works. Planning the organization of railway works. Schedule of a repair. Discussion and presentation of the planned repair.		
	Course content – project Elaboration of technology, organization and planning of selected track works (track tamping, ballast cleaning, rail grinding, track and turnout ballasting, material transport, earthworks). Execution of the bill of quantities of railway works. Preparation of cost estimate for railway works. Planning the organization of railway works. Schedule of a repair. Discussion and presentation of the planned repair.		
Prerequisites and co-requisites	Knows the basic technologies of railway works and the basics of their planning.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exercises	60.0%	30.0%
	Laboratory	100.0%	30.0%
	Lecture	50.0%	40.0%
Recommended reading	Basic literature	Kędra Z.: Technologia robót torowych. Wydawnictwo Politechniki Gdańskiej, Gdańsk, 2017. Warunki techniczne wykonania i odbioru robót nawierzchniowo-podtorzowych. Id-114, PKP PLK S.A. Kędra Z.: Materiały dydaktyczne z wykładów do przedmiotu Utrzymanie dróg szynowych.	
	Supplementary literature	KNR 2-37 Nawierzchnie kolejowe w torach o prześwicie normalnym KNR W-2-37 Budowa i remont nawierzchni torowych, tory o prześwicie normalnym 1435 mm KNP 16 Roboty torowe	
	eResources addresses		
	Example issues/ example questions/ tasks being completed		
Practical activities within the subject	Not applicable		

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