



Subject card

Subject name and code	Railways , PG_00044658						
Field of study	Transport						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
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	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Railway Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Piotr Chrostowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	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 provide knowledge in the field of methodology of designing and assessing geometric systems of railways. The main aspects related to the representation of the railway track in the situational plan, vertical alignment and cross-sections are discussed. The methodology of designing the complex geometric systems and their dimensioning in the light of the relevant railway regulations is discussed.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
Subject contents	Course content – lecture Characteristics of railway lines, main technical and operational parameters Characteristics of the representation of a railway track in plan, profile (vertical) and cross-sections Reference systems and the method of identifying the position of the track axis in space geometric elements used in the design of railways and their characteristics dimensioning of geometric elements with regard to kinematic parameters methodology of shaping geometric systems in a horizontal alignment evaluation of geometric systems and their modifications						
Prerequisites and co-requisites	The student knows the main elements of the railway infrastructure. The student understands the transport process in railway transportation system.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	project reports		50.0%		50.0%		
	test		50.0%		50.0%		
Recommended reading	Basic literature		Not applicable.				
	Supplementary literature		Not applicable.				
	eResources addresses						

Example issues/ example questions/ tasks being completed	Sample questions: Characterize the basic elements of the railroad in a cross-section, Explain what the following processes are: adjustment of the track axis, modernization of the railway line, revitalization of the railway line, What is the inventory of the track axis in the global system (spatial reference system in a given country), List the basic geometric elements in the horizontal alignment and characterize the methodology of modeling the system based on the distribution of curvature.
Practical activities within the subject	Not applicable

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