



Subject card

Subject name and code	, PG_00069229						
Field of study	Civil Engineering						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2026/2027		
Education level	first-cycle studies		Subject group				
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	4		Language of instruction		Polish		
Semester of study	7		ECTS credits		5.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Sławomir Grulkowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	30.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=46665						
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		10.0		70.0	125
Subject objectives	Obtaining basic information on the technique and organization of railway transport. Transmission of the message on vertical management in rail traffic Organization of passenger and freight transport The importance of train timetables						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K03] Can effectively, clearly and unambiguously convey information, describe activities and communicate their results/ outcomes to engineers or a wider audience using appropriate communication methods and tools.		The student is able to use social communication tools to convey information about transportation. They are able to create timetables.		[SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice		
	[K6_K04] Engages in independent lifelong learning and individually follows the development of science and technology in the field of civil engineering.		Able to interpret and describe phenomena and progress in transportation. Adapts organizational form to current needs and trends.		[SK2] Assessment of progress of work [SK3] Assessment of ability to organize work		

Subject contents	Course content – lecture LECTURE Rules and procedures for running train traffic on the railway network. Timetable preparation procedure Technology of passenger transport Technology of rail freight Interoperability Capacity of lines and railway stations. TUTORIALS Cyclical timetable Circulation and rotation of the composition Calculation of bandwidth		
	Course content – exercises Train Circulation Connectivity Index Cyclic Timetable		
Prerequisites and co-requisites	Basic information on the subjects Railway Traffic Engineering and Rail Transport Infrastructure		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Tutorials	60.0%	50.0%
	Test	60.0%	50.0%
Recommended reading	Basic literature	Jacyna M., Gołębiowski P., Krześniak M., Szkopiński J., Organizacja ruchu kolejowego, Warszawa, 2019. Żurkowski A., Pawlik M., Ruch i przewozy kolejowe. Sterowanie ruchem, Warszawa, 2010. Żurkowski A., Ewolucja i nowoczesne zasady budowy wykresu ruchu pociągów pasażerskich, Logistyka, 3, 2014. Nowosielski L., Organizacja przewozów kolejowych, KOW, Warszawa, 1999	
	Supplementary literature	Urbanyi-Popiołek I., Ekonomiczne i organizacyjne aspekty transportu, Wyższa Szkoła Gospodarki w Bydgoszczy, Bydgoszcz, 2013 Zalewski P., Siedlecki P., Drewnowski A., Technologia transportu kolejowego, WKŁ, Waesza, 2004.	
	eResources addresses		

Example issues/ example questions/ tasks being completed	What is train and shunting? Cyclical, integrated timetable Calculation of transport needs
Practical activities within the subject	Not applicable

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