

## SDAŃSK UNIVERSITY 的 OF TECHNOLOGY

## Subject card

Subject name and code	Traffic Engineering, PG_00044245								
Field of study	Civil Engineering								
Date of commencement of studies	October 2020		Academic year of realisation of subject			2023/2024			
Education level	first-cycle studies		Subject group			Optional 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	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering								
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Wojciech Kustra						
	Teachers		dr inż. Wojciech Kustra						
			mgr inż. Anna Gobis						
			mgr inż. Toma	asz Mackun					
Lesson types and methods	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM	
of instruction	Number of study hours	30.0	15.0	0.0	15.0		0.0	60	
	E-learning hours included: 0.0								
Learning activity and number of study hours	Learning activity Participation ir classes includi plan		I didactic Participation in consultation hours		Self-study SUM		SUM		
	Number of study hours	60 8.0		8.0	57.0			125	
Subject objectives	The aim of the course is to familiarise students with the description and functioning of the human-vehicle- road- traffic-environment system (CPDRO), a description of the main factors influencing traffic generation and a review of traffic management methods. On this basis, the student should apply selected traffic management methods and design elements of road facilities taking into account efficiency, economic efficiency, traffic sofety and environmental requirements								
Learning outcomes		Subi		salety a	Method of verification				
	[K6_U04] can correctly choose tools (analytical or numerical) to solve engineering problems in design of structures or construction process		The student is able to apply selected traffic research tools and basic traffic management tools in practice to assess the performance of a selected road facility and apply the most effective methods and measures for traffic management.			[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject			
	[K6_U17] has specialized skills in civil engineering within offered specialization		The student is able to use traffic analyses on a road section, or intersection necessary to estimate levels of freedom of movement at designed intersections in the diploma thesis. The student is able to use issues from Traffic Engineering in the diploma thesis.			[SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information			
	[K6_W16] Has deeper and adequate knowlege of civil engineering, within offered specialization		The student has basic knowledge of the functioning of the human- vehicle-road-environment system. He/she also has knowledge of traffic research methods and tools concerning traffic management.			[SW1] Assessment of factual knowledge			

Subject contents	contents							
	Traffic engineering.							
	Road users - man as a subject in traffic. Vehicles and their traffic conditions.							
	apacity of junctions with and without traffic lights, roundabouts.							
	Capacity of road sections.							
	Basic parameters of roads							
	The issue of different transport syste	e issue of different transport systems.						
	The role of treffic volume and encoders having treffic representation							
	i ne role or traπic volume and speed as basic traπic parameters.							
	Fundamentals of modelling and vehicle traffic analysis.							
	Road and environment. Road and traffic, climatic and meteorological factors. Traffic characteristics and parameters.							
	Traffic surveys, measurements and analysis.							
Prerequisites and co-requisites								
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade					
and criteria		50.0%	20.0%					
		100.0%	40.0%					
		100.0%	40.0%					
Recommended reading	Supplementary literature	Krystek R. i inni: Komputerowe systemy sterowania ruchem ulicznym i drogowym. Przykłady zastosowań. WKŁ 1984 Leśko M., Guzik J.: Sterowanie ruchem drogowym. WPŚ, 2000.Malarski M.: Inżynieria Ruchu Lotniczego OWPW, 2005 Czasopisma: Transport Miejski i Regionalny, Traffic Engineering & Control, Przegląd ITS, Autostrady Highway Capacity Manual, TRR Roger P. Roess, William R. McShane, Elena S. Prassas, Traffic Engineering Institute of Transportation Engineers, Trip Generation Manual						
	Resources addresses Adresy na platformie eNauczanie:							
Example issues/ example questions/ tasks being completed	Development of a selected issue in the field of traffic engineering.Methods for calculating the capacity of roundabout-type intersections, ordinary intersections and intersections with traffic lights.Traffic signal designTraffic organisation design for intersections							
	Not applicable							