



## Subject card

Subject name and code	Roads and Streets, PG_00044660						
Field of study	Transport						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
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	6		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Jacek Alenowicz				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	15.0	0.0	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		50.0	100
Subject objectives	Obtaining basic knowledge of road materials (soil, aggregates, bitumens, asphalt mixtures), pavementstructures, earthworks, drainage of roads.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W18] has proficiency in transport infrastructure as appropriate for their specialty		The student has knowledge to design a pavement structure for traffic and soil conditions and level of water in the soil and define requirements concerning materials and technology.				
	[K6_U13] able to select tools and methods, carry out assessments and simple tests of transport infrastructure and means of transport to an extent required of the specialty / learning profile		The student can choose the quality of the materials needed to build of the road. The student is able to develop a simple technical specification for the designed road section				
Subject contents	The cross-section of the road. Basic rules for the implementation of earthworks and road drainage. Types ofroad pavements. Concrete pavements. Geosynthetics in road construction. Road materials: rock andaggregates, bitumen, asphalt mixtures. Improved subgrade, Base courses. Asphalt pavements. Soil survey, bitumen and asphalt mixtures.Design of flexible and rigid pavements.						
Prerequisites and co-requisites							
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	lectures		60.0%		60.0%		
	laboratory		100.0%		40.0%		
Recommended reading	Basic literature		1. Piłat J., Radziszewski P.: Nawierzchnie asfaltowe. WKŁ 20042. Błażejowski K., Styk S.: Technologia warstw asfaltowych. WKŁ 20093. Judycki J i wsp.: Analizy i projektowanie konstrukcji nawierzchni podatnych i półsztywnych. WKŁ 2014				
	Supplementary literature		1. Szydło A.: Nawierzchnie drogowe z betonu cementowego. Polski Cement. 2004.2. Edel R. Odwodnienie dróg, WKiŁ, 20103. Głążewski M. i wsp. Roboty ziemne i rekultywacyjne w budownictwie komunikacyjnym, WKiŁ, 2010				

	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	Properties of road bitumens.The research of subgrade capacity..Designing a flexible pavement structures.	
Work placement	Not applicable	