



Subject card

Subject name and code	, PG_00069264						
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		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Transportation 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 Jaskuła				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 0.0						
	eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=2449						
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		4.0		26.0	75
Subject objectives	To learn principles of material's type, laboratory testing and quality control of highway materials.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_K01] Is aware of the key aspects of professional, ethical and social responsibility related to management, business operation, decision making and opinion formulation in civil engineering.		Knowledge of construction contract requirements.		[SK2] Assessment of progress of work		
	[K6_U07] Design and build engineering structures in a sustainable manner, with care for the natural environment and a minimum carbon footprint		Assessment of road pavements. Modern road materials.		[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task		
	[K6_U06] Conduct engineering activities in civil engineering subject area, using and applying practical knowledge and understanding of materials, equipment and tools, processes and technologies.		Assessment of road pavements. Modern road materials.		[SU1] Assessment of task fulfilment		
	[K6_W06] Demonstrates practical knowledge and understanding of materials, devices and tools, processes and technologies in the field of civil engineering (and their limitations).		Classifies and tests aggregates, bituminous binders, and asphalt mixtures.		[SW2] Assessment of knowledge contained in presentation		
	[K6_W07] Understand the investment's impact on the environment and the interrelationships and dependencies between the building structure and the natural environment		Can use recycling materials.		[SW3] Assessment of knowledge contained in written work and projects		

Subject contents	Course content – lecture		
	Course content lecture Classification and tests of aggregates. Bituminous binders: types, classification and tests. Types of asphalt mixtures and their applications. Asphalt mixture design and tests. Small size elements: kerbs, concrete paving blocks. Alternative materials, types and applications. Road pavement tests. Modern road materials.		
	Course content – laboratory		
	Course Content - Laboratory Soil and mineral aggregate testing. Asphalt binder testing. Bearing capacity test. Design and testing of asphalt mixtures.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	passing	55.0%	100.0%
Recommended reading	Basic literature	1. Piłat J., Radziszewski P., Nawierzchnie asfaltowe, WKŁ, 2004 2. Szydło A.,: Nawierzchnie drogowe z betonu cementowego, Polski Cement, 2004 3. Błażejowski K., Styk S., Technologia warstw asfaltowych, WKŁ, 2005 4. Edel R., Odwodnienie dróg, WKŁ 2002 5. Rolla S., Badania materiałów drogowych, WKŁ, 1985 6. Nowości techniki zagranicznej, zeszyty IBDiM Warszawa	
	Supplementary literature	7. The Asphalt Handbook, AI, 1989 8. Lilley, A Handbook of Segmental Paving, 1991	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Practical activities within the subject	Not applicable		

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