



## Subject card

Subject name and code	, PG_00060094						
Field of study	Civil Engineering						
Date of commencement of studies	February 2023	Academic year of realisation of subject			2023/2024		
Education level	second-cycle studies	Subject group			Obligatory subject group in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			3.0		
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. Jacek Alenowicz					
	Teachers	dr inż. Jacek Alenowicz mgr inż. Artur Ryś					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	30
	E-learning hours included: 0.0						
Address on the e-learning platform: <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=19863">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=19863</a>							
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	30	0.0		0.0		30
Subject objectives	Getting acquainted with the development in the field of materials and technologies used in road construction, with special focus on advanced laboratory testing and assessment of the quality of road materials and works. Own evaluation and proposal of independent solutions of problems from the field of road traffic engineering.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W15] has deep and adequate knowledge of civil engineering, within offered specialization and profile	The student has knowledge related to the assessment of the properties of road materials, road technologies and road traffic engineering.			[SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge		
	[K7_U06] is able to choose proper tools (measuring, analytical or numerical) to solve engineering problems, to acquire, filtrate, proces and analyse data	The student is able to plan and conduct experiments related to the assessment of the properties of road materials, road technologies and road traffic engineering and to perform analysis of the results.			[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information		
	[K7_U15] has advanced skills in civil engineering within offered specialization/profile	The student is able to define and evaluate the properties of road materials, road technologies and factors important in road traffic engineering.			[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task [SU3] Assessment of ability to use knowledge gained from the subject		
[K7_K01] is aware of necessity of professional competences improvement; obeys the professional ethics code	The student is aware of the need to improve professional and personal competences; including professional ethics because of development in material engineering and technologies as well as traffic engineering			[SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice			

Subject contents	Presentation research publications concerning the topics connected to contemporary road materials and technologies. Discussion concerning the presentations and presented research topics. Analysis of real cases (problems) from the field of road traffic engineering, discussion and proposal of improvement of current state.		
Prerequisites and co-requisites	Knowledge from the subjects "Teoria nawierzchni i materiałoznawstwo drogowe" oraz "Organizacja i sterowanie ruchem drogowym" in sem II.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Completeness of presentation, knowledge	60.0%	50.0%
	Form of presentation and discussion	60.0%	25.0%
	Activity during seminars	50.0%	25.0%
Recommended reading	Basic literature	Nowości techniki zagranicznej, Zeszyty IBDiM, Materiały z konferencji międzynarodowych: RILEM, AAPT Amerykańskie raporty badawcze, Road Materials and pavement Design, International Journal of Pavement Engineering, internet, S. Datka, W. Suchorzewski, M. Tracz, Inżynieria ruchu, W. S. Młodożeniec Budowa dróg - podstawy projektowania, Wytyczne WR-D.	
	Supplementary literature	internet	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	<p>Testing and evaluation of the cracking resistance of asphalt mixtures.</p> <p>Evaluation of the design strength of geosynthetics in engineering structures.</p> <p>Evaluation of recycled asphalt pavement (RAP) quality.</p> <p>Contemporary bridge pavements.</p> <p>Transportation problems in mass events.</p> <p>Road class as an indicator of its accessibility.</p> <p>Selection of intersection type in built-up areas.</p> <p>Combining of pedestrian/bicycle/car traffic in common area.</p>		
Work placement	Not applicable		