GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00061728		
Field of study	Environmental Engineering		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
Mode of study	Part-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 -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Dawid Ryś	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	10.0	10.0	0.0	0.0	0.0	20

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=9115

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	20	3.0	52.0	75

Subject objectives

1) Understanding the legal foundations related to road engineering

2) Understanding the fundamentals of asphalt pavement technology

3) Acquiring knowledge regarding road drainage

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W02] has broadened and well-ordered knowledge of the current law on construction, water, environmental protection and planning and spatial planning.		[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
[K7_U01] can obtain information from literature, databases and other sources; can integrate the obtained information, interpret and critically evaluate them, draw conclusions, and formulate and comprehesively justify the opinions		[SU3] Assessment of ability to use knowledge gained from the subject
K7_W05		[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>Course content – lecture

1) Basic definitions, as well as Polish legal acts and regulations related to highway engineering 2) Design of typical cross-sections for rural roads and urban streets – general principles 3) Pavement layers and their significance 4) Road construction technology 5) Technology for localized repairs (patching) 6) Principles of pavement drainage; components of road and street drainage systems

Course content – exercises

1) Cross-section design 2) CBR method for pavement design 3) Details of selected road and street drainage structures</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Test from lectures</td><td>60.0%</td><td>60.0%</td></tr>
<tr><td>Design exercises</td><td>60.0%</td><td>40.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>Edel R., Odwodnienie Dróg, WKŁ 2022 (wyd. 4)

K. Błażejowski, S. Styk – „Technologia warstw bitumicznych” WKŁ

J. Piłat, P. Radziszewski – Nawierzchnie asfaltowe” WKŁ

A. Szydło – Nawierzchnie drogowe z betonu cementowego” Polski Cement</td></tr>
<tr><td>Supplementary literature</td><td>Judycki J. i wsp. Analizy i Projektowanie Nawierzchni Podatnych i Półsztywnych, WKŁ, 2014</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Sample examination questions: Discuss the significance and functions of the wearing course in an asphalt pavement. Discuss the technology for localized repairs using a pavement recycler. Discuss the material constants used in pavement design according to the CBR method. Draw a diagram of a soakaway (infiltration well) with a sediment trap. Draw a diagram of a road gully for a storm drainage system.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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