GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00070853		
Field of study	Civil Engineering		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
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	2.0
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	dr inż. Mariusz Jaczewski dr hab. inż. Dawid Ryś dr hab. inż. Piotr Jaskuła	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	15.0	0.0	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	0.0	0.0	45

Subject objectives

Students will participate in lectures delivered by visiting professors and members of industry and government from different branches of the construction industry roads, railways, bridges and buildings. The Blended Intensive Program focuses on the topic of advanced materials and technologies, with different topics from the start of construction (design and planning), through the construction itself as considering long-term service life and maintenance, finishing at various techniques of assessing the construction condition.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W15] has deep and adequate knowlege of civil engineering, within offered specialization and profile	has structured and in-depth knowledge of the field of civil engineering, within the offered specializations and diploma profiles	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation
[K7_U15] has advanced skills in civil engineering within offered specialization/profile	has advanced skills in the field of civil engineering, with the ability to use diploma profiles	[SU5] Assessment of ability to present the results of task [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment

Subject contents

Course content – lecture
Design strategies for lightweight bridges, J. Blom (U Antwerpen)New abilities for road infrastructures elements and life cycle analysis, E. Freitas, E. Melo, O. Lima (UMinho)Sustainability Assessment of Railways and Roads Pavements (Miguel Del Sol Sánchez, Ana Jiménez del Barco Carrión, UGr)Road safety audit and pavement surface characteristics, F. Kehagia, E. ManthosThe ACR-PCR Method to Report Airport Pavement Strength, A. Graziani (UNIVPM)Innovations in road pavements / information about a joint Master SURPAVE (starting sep 2026) (Wim Van den bergh, UAntwerpen)Traffic Load Analysis for Pavement Design (D. Rys, GUT)

<table>
<tr><td>Prerequisites and co-requisites</td><td>- speaking and writing in English

- specific prerequisites for this course: Basic knowledge of civil engineering technology and sustainability.

It is recommended to follow this course in your final bachelors year or masters years.</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>presentation and written report</td><td>60.0%</td><td>100.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>Thom, N. (2024). Principles of Pavement Engineering (3rd ed.). ICE Publishing. Retrieved from https://www.perlego.com/book/4335960/principles-of-pavement-engineering-pdf (Original work published 2024)</td></tr>
<tr><td>Supplementary literature</td><td>Ppagiannakis A.T., Masad E. Pavement Design and Materials, WIley 2024</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Traffic Load Analysis for Pavement Design

Can the paving operations during construction be monitored to improve pavements durability and guarantee their life expectancy?

New abilities for road infrastructures elements and life cycle analysis</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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