GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Road and Motorway Construction II, PG_00049207		
Field of study	Civil Engineering		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2022/2023
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Part-time studies	Mode of delivery	blended-learning
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	3.0
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 hab. inż. Marek Pszczoła	
	Teachers	dr hab. inż. Marek Pszczoła	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	10.0	0.0	0.0	0.0	25

E-learning hours included: 15.0

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	25	5.0	45.0	75

Subject objectives

Specify and expand knowledge of geometric road design and pavement design.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W07] has expanded knowledge of theory of road and airport pavements, pavement maintenence, advanced methods of material testing and contruction technologies	has extended knowledge of the theory of road and airport pavement construction, pavement maintenance, advanced materials testing methods and special works technologies	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge
[K7_W06] has expanded knowledge about traffic theory, planing of road networks and junctions design, regarding economy, safety and environmental aspects	has extended knowledge of motion theory road network planning and design of road junctions from considering aspects of economics, safety and environmental protection	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation
[K7_U07] is able to design elements of road network, to apply the rules of traffic organisation and control, taking into account economy, safety and environmental factors,	is able to design elements of the road network, apply the principles of designing organization and traffic control systems, taking into account economic, safety and environmental protection aspects	[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU2] Assessment of ability to analyse information
[K7_U08] Is able to evaluate technical conditio of a road, to design its pavement and choose proper construction technology using mechanistic methods and material investigations	It is possible to assess the technical condition of roads, design the pavement structure and select the appropriate construction technologies using mechanistic methods and materials testing	[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information

Subject contents

1. News on road, interchange and intersection design.

2. Knowledge about design with particular emphasis on safety.

3. Knowledge about surface design by mechanistic methods.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="3"></td></tr>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Exercises performed</td><td>70.0%</td><td>80.0%</td></tr>
<tr><td>Attendance</td><td>50.0%</td><td>20.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Regulation of the Minister of Transport and Maritime Economy of March 2, 1999 on the technical conditions to be met by public roads and their location (Journal of Laws of 2016, item 124, i.e.</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Ochrona Pieszych podręcznik dla organizatorów ruchu pieszego. KRBRD 2014</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">1. Calculate the parameters of vertical arches.
2. Design the surface for the road with given parameters.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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