GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Road network planning, PG_00059877		
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	Optional subject group Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
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. Lech Michalski	
	Teachers	dr inż. Lech Michalski mgr inż. Łukasz Jeliński	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	0.0	0.0	0.0	30

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	30	2.0	18.0	50

Subject objectives

Getting to know the specifics of road network planning and its impact on the process of designing, building and maintaining road infrastructure, including infrastructure for pedestrians and cyclists

Learning outcomes

Course outcome	Subject outcome	Method of verification
[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,	The student is able to use computer applications used in road network planning, road network modeling, displacement modeling and road traffic forecasting.	[SU4] Assessment of ability to use methods and tools
[K7_U15] has advanced skills in civil engineering within offered specialization/profile	The student is able to use engineering and non-engineering tools used in planning road networks, assessing the existing condition and selecting solutions	[SU1] Assessment of task fulfilment
[K7_W15] has deep and adequate knowlege of civil engineering, within offered specialization and profile	The student learns the tools for planning road networks as an element of spatial policy and the construction process	[SW3] Assessment of knowledge contained in written work and projects
[K7_W06] has expanded knowledge about traffic theory, planing of road networks and junctions design, regarding economy, safety and environmental aspects	The student learns the process of planning the road network and its elements, the basic principles of shaping the road, bicycle and pedestrian networks, the principles of diagnosing the condition of the network, traffic forecasting, the issues of strategies, programs and plans regarding road networks.	[SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>The shape and structure of the network

Network planning principles (guidelines and recommendations)

Strategic planning documents

Transport plans (with elements of road network plans)

Road planning projects

Selected issues of street network planning

Forecasted road traffic

Four-stage road traffic model</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>The student has basic knowledge of road design, road traffic engineering, environmental protection and public finance</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>road network design</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>Gaca S., Suchorzewski W., Tracz M.: Road traffic engineering, WKŁ

WR-D-11-1 Guidelines for shaping the road network - Basic requirements

WR-D-42-1 Guidelines for the design of bicycle infrastructure - Planning bicycle routes

WR-D-41-1 Guidelines for the design of pedestrian infrastructure - Planning of the pedestrian route network</td></tr><tr><td>Supplementary literature</td><td>Published strategies, programs and plans for the development of the road network at national, regional and local levels.</td></tr><tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Design of a road network element with traffic forecasts made in the PTV Visum application</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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