GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00062181		
Field of study	Transport		
Date of commencement of studies	February 2023	Academic year of realisation of subject	2023/2024
Education level	second-cycle studies	Subject group	
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. Krystian Birr	
	Teachers	mgr inż. Artur Ryś dr inż. Krystian Birr	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	15.0	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	5.0	10.0	60

Subject objectives

The aim of the course is to teach students to develop and evaluate transport analyzes related to the operation of large traffic generators. Students will become familiar with the standards, good practices and most common mistakes in developing this type of analysis.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U14] able to solve detailed problems of transport infrastructure to an extent required of the specialty	The student knows and is able to develop detailed solutions related to transport services for large traffic generators.	[SU1] Assessment of task fulfilment
[K7_W14] has advanced knowledge of transport infrastructure maintenance and management to an extent required of the specialty	The student knows and is able to develop solutions related to transport infrastructure in transport systems in analyzing the impact of investments on the functioning of the transport system.	[SW1] Assessment of factual knowledge
[K7_W11] has basic knowledge of energy in transport	The student knows methods and solutions related to the management and design of elements of transport systems in terms of analyzing the impact of investments on the functioning of the transport system.	[SW1] Assessment of factual knowledge

Subject contents	Lectures:Identification, characteristics, classification of large traffic generators: sports and shopping complexes, universities, offices, office buildings, stations and airports.Methods for researching users' transport behavior.Methods of research on the volume of generated traffic.Transport behavior of users of large traffic generators.Modeling of motion potentials.The impact of large traffic generators on the load on the local transport system, spatial distribution of travel.Issues of multimodal transport service for large traffic generatorsAccessibility by public transport,Accessibility by bicycle and personal transport devices,Accessibility by road, parking problems.Traffic organization around traffic generators.Method of developing an analysis of the impact of investments on the local transport system.Management of transport services for mass events.Exercises and laboratories:Analysis of transport infrastructure in the facility area.Conducting research on vehicle traffic and passenger flows.Preparation of an analysis of the tests performed.Development of multi-variant concepts for the facility's transport services.Simulation analyzes of travel and traffic around the facility.Presentation of performed analyses, interpretation of results, proposals for changes.
Prerequisites and co-requisites	• General methodology for modeling transport processes, • Basics of estimating capacity and traffic conditions, • Knowledge in the field of traffic research and measurement.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	50.0%	50.0%
Exercise and laboratory report	100.0%	50.0%

Recommended reading

Basic literature	Ortúzar, J.d.D. oraz Willumsen, L.G.: *Modelling Transport*.Wiley-Blackwell. 2011. *Trip Generation*. Institute of Transportation Engineers: Washington, 2008.
Supplementary literature	brak
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	Describe the goals and basis for analyzing the impact of investments on the functioning of the transport system.Describe the components of developing an analysis of the impact of investments on the functioning of the transport system.Describe the traffic structure and user transport behavior for a typical facility of type X.
Work placement	Not applicable