GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00065220		
Field of study	Transport		
Date of commencement of studies	February 2024	Academic year of realisation of subject	2024/2025
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	3.0
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 hab. inż. Jacek Oskarbski	
	Teachers	mgr inż. Karol Żarski dr hab. inż. Jacek Oskarbski	

Lesson types and methods of instruction

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

To familiarise Students with data sources and their use in transport management.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K101] acknowledges the importance of knowledge related to the field of study in solving cognitive and practical problems, critically assessing the information obtained	Ability to interpret test results.	[SK5] Assessment of ability to solve problems that arise in practice [SK4] Assessment of communication skills, including language correctness [SK3] Assessment of ability to organize work [SK2] Assessment of progress of work [SK1] Assessment of group work skills
[K7_U101] is able to formulate complex research problems and adopts appropriate methods, obtaining innovative solutions, cooperating with other people, both as a leader and a team member	Ability to analyze data using advanced methods and tools.	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools [SU5] Assessment of ability to present the results of task
[K7_W101] is able to make an in-depth identification of key objects and phenomena related to the field of study, as well as theories that describe them and applicable analytical and design methods	Ability to identify data sources and how they can be used in transport management.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects

Subject contents	Lecture content: Sources of data analysis in transport systems. Big data sets (big data) in transport management (e.g. from Smart City services). Use of data from transport models in multi-criteria analyses in planning and monitoring transport deployments and activities. Decision support. Databases. Open data (opendata). Applications in transport management. Examples of transport management systems using big data.
Prerequisites and co-requisites	

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
passing the workshops	90.0%	30.0%
passing lectures	60.0%	40.0%
passing the project	90.0%	30.0%

Recommended reading

Basic literature	1. AASHTO Transportation Asset Management Guide: A FocusonImplementation. AASHTO, 2011.2. Transportation AssetManagement: Methodology andApplications. Zongzhi Li. 2018.3.Understanding Mobility as a Service (MaaS). David HensherCorinneMulley Chinh Ho Yale Wong Göran Smith John Nelson. 2020.4.Cooperative Intelligent Transport Systems: Towards highlevelautomateddriving. Meng Lu. 2019.
Supplementary literature	Strony internetowe i czasopismaIEEE TRANSACTIONS ONINTELLIGENT TRANSPORTATIONSYSTEMS,IEEETRANPORTATION RESEARCH, PART C:EMERGINGTECHNOLOGIES, PERGAMON-ELSEVIER SCIENCELTDJOURNAL OF INTELLIGENT TRANSPORTATIONSYSTEMS,TAYLOR & FRANCIS INCINTERNATIONAL JOURNAL OFVEHICLE INFORMATION ANDCOMMUNICATION SYSTEMS,INDERSCIENCE ENTERPRISESIEEE TRANSACTIONS ONVEHICULAR TECHNOLOGY, IEEE
eResources addresses	Adresy na platformie eNauczanie: Zrównoważone zarządzanie danymi w transporcie - Moodle ID: 42290 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42290

Example issues/ example questions/ tasks being completed	1 What is a Smart City. 2. what data are we capturing with new technologies. 3. how we use data in transport management. 4 What tools we use to analyse data. 5 Ways of obtaining and collecting data.
Work placement	Not applicable

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