GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	New Technologies in Transport, PG_00056238		
Field of study	Transport and Logistics		
Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Damian Bocheński	
	Teachers	dr inż. Dominik Kreft dr hab. inż. Damian Bocheński	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	0.0	0.0	0.0	15.0	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	2.0	28.0	75

Subject objectives

The aim of the course is to acquaint the Student with the basic knowledge of innovative/ modern technologies in transport systems, means of long and short-distance transport, logistics and transport management systems. It is important to present aspects in intelligent transport systems and safety improvement in transport innovations.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W08] has knowledge regarding the principles of sustainable development	The student is able to discuss, design and analyze modern transport systems in all areas of transport	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge
[K6_W05] has an organized knowledge on design, construction and operation of means and systems of transport	The student is able to develop and prepare action diagrams and discuss the possibilities in a given subject area	[SW3] Assessment of knowledge contained in written work and projects [SW2] Assessment of knowledge contained in presentation [SW1] Assessment of factual knowledge

Subject contents

The importance of new technologies in transport, The influence of technology on the development of transport and logistics. Innovative solutions in the transport of goods and people, the idea of sustainable transport development, smart city. Modern concepts in logistics, Modern IT techniques in logistics. Advanced technologies in logistics and warehousing. Artificial intelligence in logistics and transport optimization. Modern cargo identification systems. Modern reloading devices and means of transport. Telematics, Intelligent systems in transport - challenges of the 21st century. Modern management systems in transport, digitization and modern technologies in transport companies. Modern technologies and management systems in land (road, rail), sea and air transport. Safety in transport, new technologies and challenges. Transport of the future.

Prerequisites and co-requisites

The student should have general knowledge related to means of transport, transport infrastructure and intelligent transport systems.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Seminarium	50.0%	50.0%
lecture	50.0%	50.0%

Recommended reading	Basic literature	1. Długosz J., Nowoczesne technologie w logistyce, PWE 2017 2. Duraj, J., Papiernik-Wojdera, M., Przedsiębiorczość i innowacyjność. Warszawa, Difin 2010 3. Red. Joanna Gonicka, Nowoczesne technologie w informatyce i transporcie, AH-E Łódź 2010 4. Modelewski K., Inteligentny transport, Poligraf 2018 5. Rydzkowski Wł., Współczesna polityka transportowa, Polskie Wydawnictwo Ekonomiczne 2017 6. Sładkowski A., Pamuła W., Intelligent Transportation Systems Problems and Perspectives, Springer 2016 7. Wojewódzka-Król K., INNOWACJE W TRANSPORCIE, Zrównoważony rozwój. Integracja gałęzi transportu. Sztuczna inteligencja, PWN 2021 8. Wojewódzka-Król K., Załoga E., Transport, Nowe wyzwania, PWN 2016 Załoga E., Liberacki B., Innowacje w transporcie . Korzyści dla użytkownika, WNUS, Szczecin 2010
	Supplementary literature	1. Cortin S., Vitale J., Kelly E., Cathles E.: The future of mobility. Deloitte University Press, 2015 2. Engelhardt Juliusz, Nowoczesne systemy transportowe w przewozach intermodalnych, WNUS Szczecin 2020
	eResources addresses	Adresy na platformie eNauczanie: Nowoczesne techniki w transporcie, Systemy Transportu Wodnego (WIMiO), I stopnia,lato 2024/2025 (PG_00056238) - Moodle ID: 43690 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=43690 Nowoczesne techniki w transporcie - Moodle ID: 44368 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=44368
Example issues/ example questions/ tasks being completed	List and characterize pro-ecological / innovative activities in passenger transport Discuss the operation of intelligent transport systems in transport	
Work placement	Not applicable	

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