



## Subject card

Subject name and code	Intelligent Transportation Systems, PG_00060657						
Field of study	Transport and Logistics						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-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	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Zakład Projektowania Okrętu -> Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		prof. dr hab. inż. Jakub Montewka				
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		1.0		9.0	25
Subject objectives	The aim of the course is to acquaint students with the basic issues related to modern, intelligent technologies used in multimodal transport. To this end the most important aspects are presented in the field of modern solutions in transport systems, especially in terms of telematics, digitization, automation and robotization. An important part of the course are exercises in which the student analyzes a selected topic in terms of intelligent technologies in multimodal transport.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W08] has knowledge of the principles of sustainable development		The student is aware of the need to develop in a sustainable manner, taking into account a number of aspects related to a given system and the environment in which this system operates.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_W05] has established knowledge in the field of design, construction and operation of transport means and systems		The student is able to indicate the main elements related to the process of design, construction and operation of maritime transport systems and the means of transport used.		[SW3] Assessment of knowledge contained in written work and projects		
	[K6_K01] is aware of the need for continuous improvement in the field of the profession and knows the possibilities of further education		The student is aware of the pace at which detailed knowledge increases in a dynamic world. Equipped with general knowledge, he is aware of the need to update specific knowledge.		[SK5] Assessment of ability to solve problems that arise in practice		
Subject contents	The importance of new and intelligent technologies in transport. Modern technical and technological solutions in multimodal transport. The influence of technology on the development of transport and logistics. Intelligent systems in transport - challenges of the 21st century. Modern management systems in transport, digitization and modern technologies in transport companies. The idea of sustainable transport development, smart city, smart ports, smart terminals. 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 equipment and means of transport. Telematics, 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 basic knowledge related to modern solutions in transport systems, logistics and intelligence of the systems.						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Lectures	51.0%	50.0%
	Assignments	51.0%	50.0%
Recommended reading	Basic literature	<ol style="list-style-type: none"><li>1. Długosz J., Nowoczesne technologie w logistyce, PWE 2017</li><li>2. Duraj, J., Papiernik-Wojdera, M., Przedsiębiorczość i innowacyjność. Warszawa, Difin 2010</li><li>3. Cortin S., Vitale J., Kelly E., Cathles E.: The future of mobility. Deloitte University Press, 2015</li><li>4. Engelhardt Juliusz, Nowoczesne systemy transportowe w przewozach intermodalnych, WNUS Szczecin 2020</li><li>5. Red. Joanna Gonicka, Nowoczesne technologie w informatyce i transporcie, AH-E Łódź 2010</li><li>6. Modelewski K., Inteligentny transport, Poligraf 2018</li><li>7. Ślaskowski A., Pamuła W., Intelligent Transportation Systems Problems and Perspectives, Springer 2016</li><li>8. Wojewódzka-Król K., INNOWACJE W TRANSPORCIE, Zrównoważony rozwój. Integracja gałęzi transportu. Sztuczna inteligencja, PWN 2021</li><li>9. Załoga E., Liberacki B., Innowacje w transporcie . Korzyści dla użytkownika, WNUS, Szczecin 2010</li></ol>	
	Supplementary literature	<ol style="list-style-type: none"><li>1. Rydzkowski Wł., Współczesna polityka transportowa, Polskie Wydawnictwo Ekonomiczne 2017</li><li>2. dr hab. Katarzyna Śledziwska, prof. UW, dr hab. Renata Włoch, prof. UW, <i>Gospodarka cyfrowa. Jak nowe technologie zmieniają świat</i>, Wyd. UW, Warszawa 2020</li></ol>	
	eResources addresses	Adresy na platformie eNauczanie:	
	Example issues/ example questions/ tasks being completed	None	
Work placement	Not applicable		

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