



Subject card

Subject name and code	Modes of transport, PG_00064172						
Field of study	Transport						
Date of commencement of studies	October 2025		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	1		Language of instruction		Polish		
Semester of study	1		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department Of Transportation Engineering -> Faculty Of Civil And Environmental Engineering -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jacek Oskarbski				
	Teachers						
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		5.0		40.0	75
Subject objectives	Acquire knowledge of the use of modern means of transport including technological and organisational solutions.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U03] able to document a self-elaborated transport problem and present it in Polish and a foreign language, draft and read technical drawings		Ability to document and present in Polish and foreign language a problem developed by him/her in the field of means of transport, to prepare and read technical drawings.		[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		
	[K6_W02] has knowledge of physics, mechanics, electrical engineering, hydromechanics, thermodynamics, materials science, and measurement techniques necessary to understand the phenomena occurring in transportation, as well as the principles of construction and operation of infrastructure and means of transport		Acquiring knowledge of physics, mechanics, electrotechnics, hydromechanics, thermodynamics, material science and measurement techniques necessary for understanding transport phenomena and the principles of construction and operation of infrastructure and means of transport		[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects		
	[K6_K01] able to think and act creatively and enterprisingly; able to define priorities to support the delivery of an individual or group task; understands the need for continuous education and taking responsibility as a professional for their work and the work of the team		Ability to think and act creatively, and entrepreneurially; ability to prioritise to complete an individual or group task; understanding of the need for continuous learning and professional responsibility for one's own and the team's activities.		[SK1] Assessment of group work skills [SK2] Assessment of progress of work [SK3] Assessment of ability to organize work [SK4] Assessment of communication skills, including language correctness [SK5] Assessment of ability to solve problems that arise in practice		

Subject contents	MaaS (Mobility as a Service). Collaborative systems (CITS). Applications in transport management. Decision support and vehicle security systems. Support for transport safety management systems.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Pass the lectures	60.0%	60.0%
	Pass workshops	90.0%	40.0%
Recommended reading	Basic literature	Cooperative Intelligent Transport Systems: Towards high level automated driving. Meng Lu. 2019.	
	Supplementary literature	Strony internetowe i czasopisma IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS, IEEE TRANSPORTATION RESEARCH, PART C: EMERGING TECHNOLOGIES, PERGAMON-ELSEVIER SCIENCE LTD JOURNAL OF INTELLIGENT TRANSPORTATION SYSTEMS, TAYLOR & FRANCIS INC INTERNATIONAL JOURNAL OF VEHICLE INFORMATION AND COMMUNICATION SYSTEMS, INDERS SCIENCE ENTERPRISES IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, IEEE	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	What are the considerations for MaaS implementations. How MaaS differs from TMaaS. Examples and effects of C-ITS applications in transport management.		
Work placement	Not applicable		

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