



## Subject card

Subject name and code	Transport systems and processes, PG_00044638						
Field of study	Transport						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2025/2026		
Education level	first-cycle studies		Subject group		Optional subject group 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		4.0		
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						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	15.0	0.0	0.0	60
	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	60		5.0		35.0	100
Subject objectives	The aim of the course is to provide increased knowledge in the field of transport systems and processes . Students gain knowledge of the theoretical basis of the transport system , rules and methods for modeling transport subsystems or components and subsystems of the organization and management of transport. In addition, students gain the skills to construct a transport model for the selected area ( city, county ) .						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W17] has proficiency in transport systems as appropriate for their specialty		The student has ordered knowledge of the theoretical basis of the transport system and its subsystems. It also has a knowledge of the principles of modeling subsystems transport and transport processes.				
	[K6_U12] able to select tools and methods, carry out assessments and simple tests of transport systems to an extent required of the specialty / learning profile		Student is able to develop a transport model of the selected area ( city, county ) , using the most popular computer program. Student is able to assess the transport system designed to develop a transport model using the selected area (city, county), using the most popular computer program.				
Subject contents	Transport systems - synthesis . Transport models - general characteristics . Transport models - practical applications , the program VISUM . Theoretical basis of operation of transportation systems. Transport systems modeling elements . Measurement and evaluation of the functioning of the transport systems and its components. Modeling of the transport network. Organization and management of road traffic. Organization and management of rail transport . Organization and logistics management . Organization and management of air transport. Systems for urban and regional transport . Characterization and modeling of the transport system and its environment. Characterization and modeling of traffic organization and transport process . Characterization and modeling of the development of transport systems .						
Prerequisites and co-requisites	Students should complete the following courses : Fundamentals of Transport Systems .						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Lectures		60.0%		50.0%		
	Laboratory		50.0%		50.0%		

Recommended reading	Basic literature	<ul style="list-style-type: none"> <li>• Leszczyński J.: Modelowanie systemów i procesów transportowych. Oficyna Wydawnicza PW, Warszawa 1999 r.</li> <li>• Rydzkowski W. Wojewódzka-Król K.: Transport, PWN, 2007 r.</li> <li>• Jacyna M.: Modelowanie i ocena systemów transportowych. Oficyna Wydawnicza PW, Warszawa 2009 r.</li> <li>• Dorosiewicz S.: Potoki ładunków w sieciach transportowych. ITS Warszawa 2010.</li> </ul>
	Supplementary literature	1. Najder J.: Transport międzynarodowy PWE 2008.  2. Grzywacz W. i inni: Polityka transportowa WUG 2000.  3. Czasopismo: Transport Miejski i Regionalny  4. Transport samochodowy ładunków. ITS Warszawa 2009.
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	