



Subject card

Subject name and code	Transport systems and processes, PG_00044638						
Field of study	Transport						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2023/2024		
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	dr inż. Krystian Birr					
	Teachers	dr inż. Krystian Birr mgr inż. Patrycja Jerzyło dr hab. inż. Kazimierz Jamroz dr inż. Sławomir Grulkowski dr hab. inż. Marek Pszczola					
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"> • Leszczyński J.: Modelowanie systemów i procesów transportowych. Oficyna Wydawnicza PW, Warszawa 1999 r. • Rydzkowski W. Wojewódzka-Król K.: Transport, PWN, 2007 r. • Jacyna M.: Modelowanie i ocena systemów transportowych. Oficyna Wydawnicza PW, Warszawa 2009 r. • Dorosiewicz S.: Potoki ładunków w sieciach transportowych. ITS Warszawa 2010. 	
	Supplementary literature	<ol style="list-style-type: none"> 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		