



## Subject card

Subject name and code	Introduction to Transportation Systems, PG_00044534						
Field of study	Transport						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2021/2022		
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	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Kazimierz Jamroz					
	Teachers	dr hab. inż. Kazimierz Jamroz dr inż. Krystian Birr mgr inż. Łukasz Jeliński					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0 Adresy na platformie eNauczanie:						
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	5.0	25.0	75		
Subject objectives	The aim of the course is to provide students with information relating to transport systems, definitions and concepts related to transport. Students gain knowledge and skills in the field of classification, functioning of transport systems in different modes of transport, intermodal transport and get to know the impact of transport on the economy, environment and safety.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_W08] understands the theoretical basis of transport processes and systems which is useful for understanding the general transport structures and transport chains	The student has basic knowledge about the place and role of transport in the economy and social life, in the system of sciences and relations with other areas of knowledge. The student knows the main tasks of systems in the area of functioning and economic development of enterprises and the state. The student knows the functioning of transport systems and its subsystems.			[SW1] Assessment of factual knowledge		
	[K6_U11] able to describe and assess critically the design of basic means of transport and systems of transport, able to select methods for organising their technical operation	Student is able to solve specific problems that appear in technical systems. Student is able to assess the construction and functioning of transport systems and subsystems.			[SU4] Assessment of ability to use methods and tools		
Subject contents	Introduction - Sustainable transport. Basic definitions. Transport systems. Development of transport. Transport today. The future of transport. Transport chains and processes. Technology and organization of transport. Transport conveyences. Positive and negative impacts of transport. Transport network. Road transport system. Air transport. Water transport system. Rail transport. Urban transport system. Assessment of the transportation system.						

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		60.0%	60.0%
		50.0%	40.0%
Recommended reading	Basic literature	Rydzkowski W., Wojewódzka-Król K.: Transport, PWN, 2007 r. Grzywacz W. i inni: Polityka transportowa. WUG,2000	
	Supplementary literature	Bentkowska – Senator. K i inni: Transport samochodowy ładunków. ITS 2009 Gilbert R., Perl A.: Transport Revolutions: Moving people and freight without oil. FSC 2008. Naider J.: Transport międzynarodowy. PWE, 2008 Wojewódzka – Król K., Rolbiecki R.: Infrastruktura Transportu. Wydawnictwo UG 2009. Czasopismo: Transport Miejski i Regionalny	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Selected aspects of the history of transport development. Characteristics of selected transport systems (regional, national). Overview of selected innovative transport systems.		
Work placement	Not applicable		