

Subject card

Subject name and code	Infrastructure and Technology Development in Transport, PG_00119124						
Field of study	Economics						
Date of commencement of studies	October 2023	Academic year of realisation of subject	2025/2026				
Education level	Bachelor's studies	Subject group					
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	3.0				
Learning profile	academic	Assessment form	credit				
Conducting unit	Department of Transport Policy and Economic Integration -> Faculty of Economics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr Aleksandra Gus-Puszczewicz					
	Teachers	dr Aleksandra Gus-Puszczewicz					
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
	Additional information: lectures with multimedia presentations						
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	0.0	0.0	15		
Subject objectives	Familiarizing students with the specificity of infrastructure, methods of research on the level of development of transport infrastructure and principles of development of transport infrastructure. Familiarizing students with contemporary problems of development of transport infrastructure and transport technology in Poland against the background of European trends. Ability to critically evaluate the effectiveness of the implemented transport infrastructure development policy in Poland.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONL3_W03] has advanced knowledge of the relations between economic agents and social organisations operating in the national, international and intercultural arenas	The student has advanced knowledge of the relationships between economic entities and social organizations operating in the field of national and international transport.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
	[EKONL3_W09] has advanced knowledge of the evolution of theories describing economic entities and organisations as well as public institutions, and is familiar with the functional links within them	The student has knowledge of the evolution of transport theory, economic entities and organizations, as well as public institutions, and is familiar with the functional relationships that exist within them.	[SW2] presentation/project/paper/ report
	[EKONL3_U02] is able to use the knowledge of theory and data to analyse concrete economic and social processes and phenomena and to analyse these phenomena using methods developed in economics, finance and management sciences	The student is able to utilize the theoretical knowledge they possess and gather data to analyze the processes and phenomena of transportation development, as well as analyze these phenomena using methods created in economics, finance, and management sciences.	[SU5] implementation of a problem task
	[EKONL3_U03] is able to analyse the causes and course of specific economic and social processes and phenomena, and accurately analyse these phenomena using adequate methods and tools economic and social	Student potrafi analizować przyczyny i przebieg procesów i zjawisk gospodarczych i społecznych w ramach rozwoju transportu oraz trafnie analizować te zjawiska za pomocą adekwatnych metod i narzędzi ekonomicznych i społecznych	[SU5] implementation of a problem task
	[EKONL3_U08] has the ability to observe, understand and analyse economic and social phenomena and processes using appropriate scientific methods	The student possesses the ability to observe, understand, and analyze phenomena and processes of transportation development using appropriate scientific methods.	[SU1] oral statement/conversation/ discussion
	[EKONL3_K04] is willing to think and act in an entrepreneurial manner; adapts to new situations and conditions, takes on the challenges of creative thinking, is resilient in the face of failure, is able to identify risks and assess the risks of failure	The student is ready to think and act in an entrepreneurial way; adapts to new situations and conditions, embraces the challenges of creative thinking, is resilient to failures, can identify threats and assess the risk of their occurrence.	[SK8] observation of student's independent or team work
	[EKONL3_K02] is aware of the level of knowledge in the field of economics and understands the need to deepen and update this knowledge throughout life	The student is aware of their level of knowledge in the field of economics and understands the need to deepen and update this knowledge throughout life.	[SK8] observation of student's independent or team work
	[EKONL3_K01] recognises the importance of economic knowledge in identifying and solving economic problems and of consulting experts when difficulties in solving them independently	The student recognizes the importance of knowledge in the field of economics in the process of identifying and solving transport development problems and seeking expert opinions in case of difficulties in solving them independently.	[SK1] oral statement/conversation/ discussion
	[EKONL3_W02] has advanced knowledge of the different types of existing business entities and organisations and public institutions	The student has an advanced knowledge of various types of existing entities and economic organizations as well as public institutions operating within the transport system.	[SW2] presentation/project/paper/ report

Subject contents	<p>1. Specificity of transport infrastructure as a determinant of transport development (essence, importance of infrastructure as the basis of socio-economic development, technical and economic features of transport infrastructure, principles of transport infrastructure development).</p> <p>2. Interdependencies and models of transport infrastructure development.</p> <p>3. Status and directions of transport infrastructure development in Europe (socio-economic effects of transport infrastructure development, international conflicts in the process of transport infrastructure development, the process of unifying transport networks in Europe, TEN networks, core network, transport corridors, sources of financing for transport infrastructure development).</p> <p>4. Status and directions of transport infrastructure development in Poland (status of transport infrastructure in Poland in the light of European trends, effects of the current state of infrastructure, development problems. trends in the development of road infrastructure, rail infrastructure, inland waterways, directions of development of point infrastructure in transport).</p> <p>5. Directions of development of cargo transport technologies within individual modes of transport (transport process and technological process, transport technologies in road, rail and water transport).</p> <p>6. Directions of development of combined transport as an environmentally friendly transport technology (multimodal and intermodal transport, definition and types of combined transport, conditions for the development of combined transport, forms of rail-road transport, development of combined transport in Europe, problems of the development of combined transport in Poland).</p>								
Prerequisites and co-requisites									
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="454 913 794 943">Subject passing criteria</th> <th data-bbox="799 913 1139 943">Passing threshold</th> <th data-bbox="1144 913 1482 943">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="454 949 794 990">activity during classes and student's own work</td> <td data-bbox="799 949 1139 990">51.0%</td> <td data-bbox="1144 949 1482 990">100.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	activity during classes and student's own work	51.0%	100.0%
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Recommended reading	Basic literature	<p>1.P. Rosik, J. Wójcik (2023), Transport Infrastructure and Regional Development: A Survey of Literature on Wider Economic and Spatial Impacts, <i>Sustainability</i>, 15(1), 548; https://doi.org/10.3390/su15010548</p> <p>2. A. J. Khadaroo, B. Seetanah (2010), Transport Infrastructure and Foreign Direct Investment, <i>Journal of International Development</i>. <i>J. Int. Dev.</i> 22, 103123, https://onlinelibrary.wiley.com/doi/epdf/10.1002/jid.1506</p>							
	Supplementary literature	<p>2. J. Short, A. Kopp (2005), Transport infrastructure: Investment and planning. Policy and research aspects, <i>Transport Policy</i> 12 (2005) 360367.</p>							
	eResources addresses								
Example issues/ example questions/ tasks being completed	<p>What measures can be used to assess the infrastructure potential of a given region?</p> <p>How can the level of infrastructure development in individual transport sectors in Poland be assessed?</p> <p>Identification of the effects of the existing level of transport infrastructure development in Poland?</p>								
Work placement	Not applicable								

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