University of Gdańsk

Subject card

Subject name and code	Transport systems and processes , PG_00199001						
Field of study	Economics						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study 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	6		ECTS credits		5.0		
Learning profile	academic		Assessment form		exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Ryszard Rolbiecki, prof. UG				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	15.0	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		0.0		65.0	125
Subject objectives	The subject aims to familiarize students with the basic industry terminology, essence, systematics, principles of development of transport systems as a whole, taking into account the integration of individual transport subsystems and the role of transport infrastructure as a basic, next to means of transport, factor of production of transport services. The subject also aims to present mechanisms related to the functioning of the transport market, including costs of providing services, price formation, transport exchanges. In addition, the subject aims to identify transport processes, their specificity and importance in supply chains in the light of growing needs (demand for transport) and requirements of cargo operators.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[EKONL3_W04] knows the types of economic and social ties and the regularities governing them	The student has knowledge about the processes and phenomena occurring in the transport system and market and is able to identify the relationships and regularities between them.	[SW4] test/exam - oral or written [SW1] 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 has the competence to creatively prepare a project in which he proposes solutions to problems related to the development of the transport system and the course of transport processes	[SK2] presentation/project/paper/ report [SK4] test/exam - oral or written
[EKONL3_W02] has an advanced knowledge of the different types of existing business entities and organisations and public institutions	The student has advanced knowledge of entities and institutions responsible for shaping the development and functioning of the transport system, as well as entities operating in the TSL sector	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[EKONL3_W07] has an advanced knowledge of the economic and financial principles of the functioning and management of economic entities and organisations as well as the legal, organisational, moral and ethical norms and rules governing the functioning of public institutions	The student has advanced knowledge of the principles of development and mechanisms of operation of transport systems.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[EKONL3_U01] can correctly interpret economic and social phenomena and apply knowledge of economics, finance and management sciences to explain economic phenomena	The student is able to correctly interpret the processes and phenomena occurring in the transport system and use the acquired knowledge in practical applications.	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
[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	The student is able to prepare a project in which they correctly interpret the processes and phenomena occurring in the transportation system and are able to apply the acquired knowledge in practical applications.	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written

Subject contents

1. The essence and systematics of transport systems
2. Integration of transport subsystems
3. Transport infrastructure management,
4. Mobility management
5. The essence and characteristics of transport processes
6. Demand and supply in the transport market
7. Market processes in transport
8. Functioning of transport exchanges
9. Transport costs and price formation
10. Innovative processes in transport

Any doubts regarding the issues discussed during classes can be discussed during consultations.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	51.0%	50.0%
Project	51.0%	30.0%
Class participation	51.0%	20.0%

Recommended reading	Basic literature	1. Rustamov K., Rustamova N., Nazarov A., Abdukodyrova M., (2024), The State of the Transport Services Market and Development Trends, RESEARCH ARTICLE, https://www.researchgate.net/profile/Nodira-Rustamova/publication/378892505_The_state_of_the_transport_services_market_and_dev links/66003e2fd3a08551424536c4/The-state-of-the-transport-services-market-and-development-trends.pdf 2. Van Wee B., Annema J.A., Banister D., Pudāne B., (2023), The transport system and transport policy: an introduction, Published by Edward Elgar Publishing Limited, USA, https://books.google.pl/books?hl=pl&lr=&id=k_DREAAAQBAJ&oi=fnd&pg=PR1&dq=transport+sys +scientific+articles&ots=SHsZFAPR_p&sig=K8bT-4ciJZZBx7l69-JyQRIsees&redir_esc=y#v=onepage&q=transport%20systems%20-%20scientific%20articles&f=false 3. Dai J. Alvarado R., Ali S., Ahmed Z., Saeed M. S. Meo (2023), Transport infrastructure, economic growth, and transport CO2, emissions nexus: Does green energy consumption in the transportsector matter? Environmental Science and Pollution Research 30:4009440106, https://link.springer.com/article/10.1007/s11356-022-25100-3 4. Kadyraliev A., Supaeva G., Bakas B., et.al. (2022), Investments in transport infrastructure as a factor of stimulation of economic development, Transportation Research Procedia, Volume 63, 2022, Pages 1359-1369, https://www.sciencedirect.com/science/article/pii/S235214652200401X
	Supplementary literature	1. Matile S., Jentzsch A.V., Montenegroa J., Fina A., (2011), Recent synthetic transport systems, Chemical Society Reviews, vol. 40, n° 5, p. 24532474 2. Sokolov Y., Efimova O. ,Lavrov I., Pokrovskaya O., (2019), Investigation of the market potential of transport and logistics services in the 1520 space, IOP Conference Series:Earth and Environmental Science https://iopscience.iop.org/article/10.1088/1755-1315/403/1/012213/pdf 3. Skorobogatova O., Kuzmina-Merlino I., (2017), Transport Infrastructure Development Performance, Procedia Engineering 178 (2017) 319 329
	eResources addresses	
Example issues/ example questions/ tasks being completed	1. Explain the essence and structure of the transport system 2. How can we assess the level of infrastructure development in individual transport sectors in Poland compared to other EU countries? 3. What are the trends in the development of the transport market in individual transport sectors? 4. Discuss the course of the transport process using a selected transport sector as an example 5. What is the significance of transport exchanges in the functioning of supply chains? 6. The significance and directions of innovation in the development of means of transport	
Work placement	Not applicable	

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