University of Gdańsk

Subject card

Subject name and code	Information systems in transport, forwarding and logistics, PG_00204875		
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	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 Dorota Książkiewicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	30.0	0.0	15.0	0.0	45

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	45	0.0	30.0	75

Subject objectives

The objective of the course is to equip students with knowledge and skills related to the use of modern information systems supporting transport, freight forwarding, and logistics management. Students will learn about IT tools and technologies applied in the TSL industry and their use in optimizing operational processes and decision-making.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[EKONL3_W04] knows the types of economic and social ties and the regularities governing them	understands the types of economic and social linkages occurring within the transport, freight forwarding, and logistics sector, as well as the rules and mechanisms governing them, including the impact of IT systems on these relationships.	[SW2] presentation/project/paper/ report
[EKONL3_W06] has an advanced knowledge of selected methods and tools, including statistical and econometric techniques, for describing economic agents and structures as well as social institutions and the processes taking place in them	is familiar with selected methods and tools, including statistical, econometric, and IT techniques, that enable the analysis and description of economic entities and logistics and transport processes supported by information systems.	[SW2] presentation/project/paper/ report
[EKONL3_U06] uses the knowledge acquired in economics, finance and management to solve economic and social dilemmas arising in the professional context	applies knowledge from economics, finance, management, and information systems to resolve economic and organizational dilemmas encountered in professional practice within the transport, freight forwarding, and logistics industry.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions	correctly identifies, diagnoses, and resolves dilemmas and alternative solutions related to the use and management of information systems in the transport, freight forwarding, and logistics industry.	[SK2] presentation/project/paper/ report
[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	is able to analyze the causes and course of specific processes and phenomena related to the functioning of information systems in the transport, freight forwarding, and logistics sector, and accurately evaluate these phenomena using appropriate economic, social, and IT methods and tools.	[SU2] presentation/project/paper/ report
[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	is prepared to think and act entrepreneurially in the field of IT systems supporting transport, freight forwarding, and logistics; adapts to evolving technologies and market conditions, embraces the challenges of creative problem-solving, demonstrates resilience to setbacks, and is capable of identifying threats related to system implementation and use, as well as assessing their associated risks.	[SK1] oral statement/conversation/ discussion [SK2] 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	is able to use theoretical knowledge and collect data to analyze processes and phenomena related to the functioning of information systems in the transport, freight forwarding, and logistics sector, as well as analyze them using methods developed in economics, finance, and management sciences.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report

<table>
<tr><td>Subject contents</td><td>1. Introduction to Information Systems in Transport, Shipping, and Logistics (TSL)
2. Classification and Types of Information Systems in Logistics
4. 3. Transport Management Systems (TMS)
5. Warehouse Management Systems (WMS)
6. ERP Systems in Logistics Enterprises
7. EDI and Electronic Data Interchange
8. GIS Systems and Their Role in Transport
9. Shipment Tracking and Vehicle Monitoring Systems
10. Digitization of the Supply Chain and Digital Logistics Platforms
11. Modern Technologies in TSL Artificial Intelligence, Big Data, Autonomous Vehicles, Drones, Warehouse Robotics
Security and Reliability of Information Systems
12. Trends and the Future of IT in Logistics
Students have the opportunity to receive additional academic support during consultation hours with the course instructor.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Knowledge of transport, forwarding and logistics market</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>presentation of project results</td><td>51.0%</td><td>80.0%</td></tr><tr><td>discussion/activity</td><td>51.0%</td><td>20.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>D. Książkiewicz: Rozwój transportu, spedycji I logistyki w dobie cyfryzacji i globalnej gospodarki. Wydawnictwo UG, Gdańsk 2021

Nowe rozwiązania techniczne, organizacyjne i informatyczne w transporcie i logistyce. Praca zbiorowa pod red. Józefa Stokłosy i Ewy Dębickiej, e-book, 2023.

Śledziewska, K., & Włoch, R. (2020). Gospodarka cyfrowa. Jak nowe technologie zmieniają świat. Wydawnictwa Uniwersytetu Warszawskiego.</td></tr><tr><td>Supplementary literature</td><td>Dembińska Izabela Frankowska Marzena Malinowska Magdalena Tundys Blanka: Smart logistics. Wydawnictwo edu-Libri, 2018</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Compare the functionalities of TMS and WMS systems. Provide examples of their applications.
What are the advantages and risks of using EDI in logistics?
What is the significance of digital logistics platforms in the context of Logistics 4.0?</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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