

Subject card

Subject name and code	Information systems in TSL, PG_00169996						
Field of study	Economics						
Date of commencement of studies	October 2025		Academic year of realisation of subject			2027/2028	
Education level	Bachelor's studies		Subject group			Obligatory subject group in the field of study Optional subject group	
Mode of study	full-time studies		Mode of delivery			at the university	
Year of study	3		Language of instruction			Polish 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	0.0	0.0	30
	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	30		10.0		35.0	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_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
	[EKONL3_W06] have 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_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_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_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_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_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

Subject contents	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.		
Prerequisites and co-requisites	Knowledge of transport, forwarding and logistics market		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	discussion	51.0%	20.0%
	presentation	51.0%	80.0%
Recommended reading	Basic literature	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.	
	Supplementary literature	Dembińska Izabela Frankowska Marzena Malinowska Magdalena Tundys Blanka: Smart logistics. Wydawnictwo edu-Libri, 2018	
	eResources addresses		
	Example issues/ example questions/ tasks being completed	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?	
Work placement	Not applicable		

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