University of Gdańsk

Subject card

Subject name and code	Logistics in e-commerce , PG_00199000						
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							
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Dariusz Weiland				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	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 aim of the course is to familiarize students with key aspects of the functioning of logistics processes in e-commerce. Students will acquire knowledge on the organization and optimization of the supply chain in a digital environment, the specifics of warehouse management, order fulfillment and distribution in e-commerce. The classes also aim to prepare students for a critical analysis of logistics models used by industry leaders and for making logistics decisions in a dynamic and digital market environment.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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 the development of e-logistics and the need to continuously deepen knowledge in this area.	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
	[EKONL3_U07] is able to participate in analyses and evaluations of alternative solutions to economic and social problems and to choose the methods and instruments to resolve them rationally	The student is able to indicate alternative solutions to logistics problems in e-commerce and justify the selection of optimal solutions.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
	[EKONL3_U09] is able to prepare written work, in Polish and in a foreign language, on specific economic and social issues, using specialist terminology, theoretical and methodological approaches, principles of collecting data from various sources, their description and interpretation, making inferences based on scientific literature and factual data, and making international comparisons	The student is able to prepare a written analysis of logistics processes in e-commerce using data and specialist literature.	[SU2] 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	The student is able to analyse the causes and effects of changes in e-commerce logistics, using adequate economic analysis tools.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
	[EKONL3_W03] knows the relations between economic agents and social organisations operating in the national, international and intercultural arenas	The student has knowledge about the functioning of logistics in the system of relations between economic entities on the domestic and international market.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
	[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 analyze logistic and economic phenomena in e-commerce, using methods appropriate for economic sciences.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
	[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 knows the basic principles of logistics in e-commerce enterprises, taking into account economic and organizational aspects.	[SW4] test/exam - oral or written
	[EKONL3_W11] knows the general principles for the creation and development of forms of individual entrepreneurship, using knowledge of economics, finance and management sciences	The student knows the general principles of creating and developing logistics projects in the e-commerce sector based on economic and managerial knowledge.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
	[EKONL3_W01] has advanced knowledge of the nature of social sciences, their place in the system of sciences, knows the role of economic sciences in this system and uses universal economic terminology	The student knows the terminology and basic concepts in the field of digital logistics and e-commerce and their application in the analysis of economic phenomena.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report

Subject contents

Lecture content:
1. Introduction to logistics in e-commerce: Definitions, place of logistics in e-commerce, comparison with traditional logistics, trends and importance of e-commerce in the economy
2. Logistics processes in e-commerce and their specificity: Order handling, fulfillment models, integration of sales channels, logistics as an element of customer experience
3. Storage and inventory management in e-commerce: Types of warehouses, automation, fulfillment centers, dark stores, inventory management in a high-variability environment
4. Last mile and urban logistics: Courier deliveries, collection points (PUDO, Parcel lockers), bicycle deliveries, sustainable logistics, smart cities
5. Returns and reverse logistics in e-commerce: Return models, impact on costs and customer satisfaction, logistics processes on the customer and seller's side
6. IT systems supporting e-commerce logistics: ERP, WMS, TMS, API integration, track & trace, process automation, artificial intelligence and IoT in logistics
7. Challenges and the future of logistics in e-commerce: Trends: automation, robotization, eco-logistics, AI, data analysis.

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

Prerequisites and co-requisites

The student should have:
Basic knowledge of logistics and supply chain management, acquired during previous subjects such as: Fundamentals of Logistics
Knowledge of the basics of economics and enterprise management, allowing for understanding business processes in a systemic approach, acquired during the subject: Methods and tools for describing economic systems

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Test	51.0%	60.0%
Project/Referat	51.0%	40.0%

Recommended reading

Basic literature

Weiland, D., & Wierzbowski, P. (2021). Koncepcja Control Tower jako rozwiązanie problemów w procesach dystrybucji ostatniej mili dla przedsiębiorstw 3PL i 4PL - ujęcie teoretyczne. In C. Mańkowski & L. Reszka (eds.), Modelowanie procesów i systemów logistycznych (Vol. 22, pp. 87108). Wydawnictwo Uniwersytetu Gdańskiego.
Weiland, D., & Wierzbowski, P. (2021). Sprawność procesów logistyki informacji w obliczu rozwoju sztucznej inteligencji. In C. Mańkowski & L. Reszka (eds.), Modelowanie procesów i systemów logistycznych (Vol. 22, pp. 259280). Wydawnictwo Uniwersytetu Gdańskiego.
Weiland, D., & Wierzbowski, P. (2020). Logistyka informacji w gospodarce 4.0. Wydawnictwo Uniwersytetu Gdańskiego.
Weiland, D. (2017). The logistics of information in customer service of online clothing shops. Roczniki Naukowe Wyższej Szkoły Bankowej W Toruniu, Article 16 3. https://doi.org/10.19197/tbr.v16i3.130
Weiland, D. (2017). The role of information in e-commerce. Transport Economics and Logistics, 68, 103115. https://doi.org/10.5604/01.3001.0010.5326
Weiland, D. (2016). Logistyka informacji jako podstawowy element w budowaniu przewagi konkurencyjnej w e-commerce. Studia Ekonomiczne. Zeszyty Naukowe Uniwersytetu Ekonomicznego w Katowicach, Article 306.

Supplementary literature

Industry reports and publications (online):
PwC Polska annual reports on the e-commerce market in Poland
Gemius Polska E-commerce in Poland (latest edition)
Last Mile Experts reports on last mile deliveries and city logistics
Statista, McKinsey, Deloitte Insights international reports (in English)

eResources addresses

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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