University of Gdańsk

Subject card

Subject name and code	Multimodal Transport, PG_00199710						
Field of study	International Economic Relations						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Master'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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Ernest Czermański				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	0.0	30.0	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		40.0	100
Subject objectives	To familiarise students with the specifics of the functioning and organisation of multimodal supply chains, the transport and transhipment technologies used, and the calculation of door-to-door multi-modal transport costs.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MSGMU2_W09] has a knowledge of selected areas of the functioning of a modern enterprise in the national and international environment; understands the conditions, principles and consequences of decisions taken in its structures aiming at the development, and the dependencies among enterprises on the international market	The student has knowledge of: the functioning of multimodal/ intermodal operators, knows the specifics of the functioning of this type of entity, their scope of activity and responsibilities.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
	[MSGMU2_K06] is ready to independently identify, diagnose and responsibly resolve dilemmas and alternative solutions related to his/her profession and the development of professional achievements	The student is ready to independently identify, diagnose and responsibly resolve dilemmas and various solution options related to the planning and implementation of multimodal freight transport.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written
	[MSGMU2_U06] can identify types of risks related to international operations of enterprises and correctly determine their consequences and methods of mitigation, with a skilful application of theory, using appropriate research method	The student is able to identify the types of risk associated with the organisation of multimodal supply chains and correctly determine their consequences and methods of mitigation, skilfully applying theory and using the appropriate research method.	[SU4] test/exam - oral or written
	[MSGMU2_W13] has an in-depth knowledge of methods and tools for describing economic phenomena, including data acquisition techniques, which make it possible to describe and analyse economic entities functioning on the international market as well as processes and phenomena occurring in them and between them, and also those supporting decision-making processes	The student knows and understands the methods and tools for describing economic phenomena, including data collection techniques, allowing them to describe and analyse intermodal operators and the processes and phenomena occurring within and between them.	[SW4] test/exam - oral or written
	[MSGMU2_W02] has an in-depth knowledge and understanding of theory in the field of international economics, international economic relations and complementary disciplines	The student is familiar with advanced terminology in the field of multimodal transport.	[SW4] test/exam - oral or written
	[MSGMU2_W04] has in-depth knowledge of of different types and elements of economic structures and institutions, including institutions, organisations and economic entities; understands the causes, course, scale and consequences of changes occurring in them, as well as relations between them on a national, international and intercultural scale; knows the theories explaining relations among them	The student has in-depth knowledge of the various types and elements of multimodal transport systems, understands the causes, course, scale and consequences of changes occurring in them, as well as the interdependencies between them on a national, international and intercultural scale.	[SW4] test/exam - oral or written
	[MSGMU2_W05] has a deep knowledge of the world economy, principles of global market functioning and international financial relations as well as the process of their evolution; understands the causes, regularities and consequences of occurring changes	The student has in-depth knowledge of the transport system, the principles of the multimodal transport services market and the process of its evolution, and understands the causes, patterns and consequences of the changes taking place.	[SW4] test/exam - oral or written
	[MSGMU2_W03] knows and understands types of economic ties and the regularities governing them; understands the conditions and principles of the functioning of the market and the market mechanism in the national, international and global aspect	The student knows and understands the types of economic and technological links between individual participants in a multimodal supply chain.	[SW4] test/exam - oral or written

Course outcome	Subject outcome	Method of verification
[MSGMU2_U02] can observe, evaluate and critically analyse the causes and course of processes and phenomena taking place in the open economy; can formulate his/her own opinions on the subject, interpret statistical data and economic indicators necessary in this respect, and also forecast economic processes and phenomena using advanced methods and tools applied in economic sciences	The student is able to observe, evaluate and critically analyse the causes and course of processes and phenomena occurring in the multimodal transport sector, formulate their own opinions on the subject, interpret the necessary statistical data and economic indicators in this area, and forecast transport processes and phenomena using advanced methods and tools used in economic sciences.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
[MSGMU2_K03] is ready to actively participate in groups, organisations and institutions conducting professional projects concerning the functioning of economic entities in the conditions of globalisation and the development of integration processes	The student is ready to actively participate in groups, organisations and institutions involved in professional multimodal freight transport in the context of globalisation and the development of integration processes in transport.	[SK4] test/exam - oral or written
[MSGMU2_U07] can plan and manage a commercial transaction on the international market, conduct effective negotiations, analyse and critically assess the course of the transaction	The student is able to plan a multimodal door-to-door supply chain and manage its implementation, conduct effective negotiations with suppliers of chain segment services, analyse and critically evaluate the chain's performance.	[SU4] test/exam - oral or written
[MSGMU2_U10] can accurately select and use sources of information on international economic relations, evaluate, critically analyse and creatively interpret them, and can present them in an innovative way, using advanced information and communication techniques	The student is able to select and use sources of information on multimodal transport appropriately, evaluate, critically analyse and creatively interpret them, and present them in an innovative way using advanced information and communication technologies.	[SU4] test/exam - oral or written
[MSGMU2_U04] can use the acquired knowledge to formulate and solve complex problems related to the operation of economic entities on the international market, with particular emphasis on the European Union market	The student is able to use their knowledge to formulate and solve complex problems related to the functioning of the freight transport system on the international market, with particular emphasis on the European Union market.	[SU4] test/exam - oral or written
[MSGMU2_U03] can identify and analyse relations between business entities and institutions in their national and international environment	The student is able to identify and analyse the relationships between participants in multimodal supply chains in their national and international environment.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written

Subject contents

Introductory issues. Organisational matters. Introduction to the subject (etymology, history, definitions, essence, functions of intermodal loading units). The origins of containers. Construction and types of containers. Definitions and standardisation of containers. Container construction (construction elements, construction supervision). Classification of containers (universal, isothermal, etc.). Container marking. Evolution of containers. Rules for the placement and securing of containers. Securing systems. Terminals and container handling. Composition of special cargoes (oversized containers, oversized container cargoes, others). Containers with dangerous cargo. Organisation of container transport (rail-road, sea-land transport). Means of transport in various modes of transport. Transport routes. Transport and transhipment technologies. Transport services and their documentation. Elements of container management. Other types of intermodal loading units.

L 1 The essence of multimodal transport
L 2 Development of multimodal transport involving sea and inland waterways
L 3 Development of European combined transport involving transport
L 4 Selected aspects of the European Union's transport policy
L 5 Sustainable development of the transport market
L 6 The essence and types of intermodal transport
L 7 Technical and technological aspects of intermodal transport
L 8 Land-sea container transport
L 9 Land-ferry transport
L 10 Rail-road transport
L 11 Organisational aspects

Prerequisites and co-requisites	transport economics, international economic relations	
Assessment methods and criteria		

Subject passing criteria	Passing threshold	Percentage of the final grade
written exam	51.0%	100.0%

Recommended reading	Basic literature	1. ed. E. Czermański. E-book on combined transport in the Baltic Sea Region, Wyd. ITiHM UG, Gdańsk 2021 2.Rokicki T. 2015. Intermodalne jednostki ładunkowe. Wydawnictwo SGGW. Warszawa. 3.Stokłosa J. 2009. Transport intermodalny. Technologia i organizacja. Wyższa Szkoła Ekonomii i Innowacji. Lublin. 4.Wronka J. 2009. Transport kombinowany / intermodalny. Teoria i praktyka. Wydawnictwo Wnus. 5.Zielaskiewicz H. 2010. Transport intermodalny na rynku usług przewozowych. Wydawnictwo PS Trade Trans. 6.Vademecum konteneryzacji. Formowanie kontenerowej jednostki ładunkowej. Red. nauk. Wiśnicki B. 2006. Wydawnictwo Link 7.Logistyka. Wybrane zagadnienia (praca zbiorowa). 2008. Wydawnictwo SGGW. Warszawa. 8.Płaczek E. 2006. Logistyka międzynarodowa. Akademia Ekonomiczna Katowice.
	Supplementary literature	Wiśnicki, B., & Bonk, D. (2020). Analysis of combined transport terminal operations. Jacyna, M., Pyza, D., & Jachimowski, R. (2017). Transport intermodalny: projektowanie terminali przeładunkowych. PWN. Jachimowski, R. (2019). Ocena funkcjonowania terminali intermodalnych w aspekcie realizowanych procesów transportowo-przeładunkowych, Oficyna Wydawnicza Politechniki Warszawskiej. Filina-Dawidowicz, L., Stankiewicz, S., Čižiūnienė, K., & Matijošius, J. (2022). Factors influencing intermodal transport efficiency and sustainability. Cognitive Sustainability, 1(1).
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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