

Subject card

Subject name and code	Eco-Innovations in Logistics and Transport: Challenges and Solutions, PG_00179834						
Field of study	Economics, International Economic Relations						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master'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	1		Language of instruction		Polish Polish		
Semester of study	1		ECTS credits		2.0		
Learning profile	academic		Assessment form				
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	30.0	0.0	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		0.0		0.0	30
Subject objectives	The aim of the course is to familiarize students with current environmental challenges in logistics and transport and to present modern, innovative solutions that support sustainable development. The course provides knowledge of technological, organizational, and process-based eco-innovations and their role in reducing the environmental impact of transport activities. Students will learn to analyze sustainability strategies in logistics, evaluate the effectiveness of eco-friendly solutions, and identify both barriers and opportunities for their implementation in business practice.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONMU2_W08] has an in-depth knowledge of processes occurring in enterprises and economic organisations and with related areas, as well as of processes of change in public institutions; knows methods of research on the regularities governing these changes, taking into account the influence of external stakeholders on them	The student has in-depth knowledge of the processes occurring in enterprises and economic organizations related to the implementation of eco-innovations in logistics and transport, as well as of the institutional changes within public bodies supporting sustainable development; the student is familiar with methods for studying the regularities governing these changes, including the influence of external stakeholders.	[SW2] presentation/project/paper/report
	[EKONMU2_K03] inspires and organises preparation of economic and social projects, following the idea of sustainable development, reconciling legal, economic, ecological, political and social requirements	The student inspires and organizes the development of projects in the field of logistics and transport in line with the idea of sustainable development, demonstrating the ability to reconcile legal, economic, environmental, political, and social requirements to implement eco-innovative solutions.	[SK2] presentation/project/paper/report
	[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 apply acquired knowledge to formulate and solve complex problems related to the implementation of eco-innovative solutions in the operations of economic entities on the international market, with particular emphasis on sustainability policies and regulations in force within the European Union market.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[EKONMU2_U05] uses (legal, professional, ethical) normative systems and can effectively solve complex economic and social problems using them	The student is able to apply normative systems – legal, professional, and ethical – to effectively solve complex economic and environmental problems related to the implementation of eco-innovations in logistics and transport.	[SU2] presentation/project/paper/report
	[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, organizations, and institutions carrying out professional projects related to the implementation of eco-innovations in logistics and transport, particularly in the context of globalization and the development of integration processes supporting sustainable development.	[SK2] presentation/project/paper/report
	[EKONMU2_U07] can independently propose solutions to complex economic or social problems, select methods of analysis and conduct conclusive procedures in this respect	The student is able to independently propose solutions to complex economic and environmental problems related to logistics and transport, select appropriate analytical methods, and carry out procedures that enable the evaluation and implementation of eco-innovative solutions in practice.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[EKONMU2_W05] has an extended knowledge of the human being as a manufacturer and consumer and extended knowledge of the human being as a creator of culture and social structures	The student has advanced knowledge of the human being as a producer and consumer in the context of the environmental impact of logistics and transport activities, as well as an understanding of humans as creators of organizational culture and social structures that support sustainable development and eco-innovation.	[SW2] presentation/project/paper/report

	<table><tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr><tr><td>[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</td><td>The student is able to identify types of risks related to the international activities of enterprises in the context of implementing eco-innovations in logistics and transport, correctly assess their consequences, and propose risk mitigation methods, skillfully applying relevant theories and appropriate research methods.</td><td>[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report</td></tr></table>	Course outcome	Subject outcome	Method of verification	[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 types of risks related to the international activities of enterprises in the context of implementing eco-innovations in logistics and transport, correctly assess their consequences, and propose risk mitigation methods, skillfully applying relevant theories and appropriate research methods.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report					
Course outcome	Subject outcome	Method of verification										
[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 types of risks related to the international activities of enterprises in the context of implementing eco-innovations in logistics and transport, correctly assess their consequences, and propose risk mitigation methods, skillfully applying relevant theories and appropriate research methods.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report										
Subject contents	1.Introduction to Sustainable Logistics and Transportation 2. Impact of the Transport Sector on the Natural Environment 3. Overview of Environmental Regulations and Policies in Transportation and Logistics 4. Alternative Energy Sources in Transportation 5. Intelligent Transport Systems (ITS) as Tools for Eco-Innovation 6. Green Logistics and Supply Chain Management 7. Return logistics and waste management 8. Optimization of Transport and Logistics in the Context of Carbon Footprint Reduction 9. Eco-Innovative Materials and Packaging Technologies 10. Digitalization and Automation as Support for Sustainable Transport and Logistics 11. Barriers and Motivations in Implementing Ecological Solutions 12. Case Studies: Successes and Failures of Eco-Innovations in the Industry 13. The Role of Public Policy and EU Funds in Promoting Eco-Innovations 14. The Future of Eco-Innovations in Transport and Logistics: Trends, Technologies, and Challenges Any doubts arising during the implementation of the subject matter or interpretation issues will be resolved during consultations.											
Prerequisites and co-requisites	Basic knowledge on logistics processes											
Assessment methods and criteria	<table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>discussion</td><td>0.0%</td><td>20.0%</td></tr><tr><td>presentation</td><td>50.0%</td><td>80.0%</td></tr></table>	Subject passing criteria	Passing threshold	Percentage of the final grade	discussion	0.0%	20.0%	presentation	50.0%	80.0%		
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presentation	50.0%	80.0%										
Recommended reading	Basic literature	Szymonik Andrzej Stanisławski Robert Błaszczyk Artur, Nowoczesna koncepcja ekologii, Diffin 2021. Gospodarka a środowisko i ekologia. Praca zbiorowa pod red. Krzysztofa Małachowskiego, CeDeWU 2023 Zrównoważona logistyka. Praca zbiorowa pod red. Katarzyny Kolańskiej-Morawskiej i Moniki Ziółko, CeDeWu 2023										
	Supplementary literature	D. Książkiewicz: Clean Air Policy in European Marine Ports. Scientific Papers of Silesian University of Technology Organization and Management Series Issue No. 149										
	eResources addresses											
	Example issues/ example questions/ tasks being completed	What are the characteristics of modern packaging? What do ecological strategies for planning, warehousing, and distribution involve?										
Work placement	Not applicable											

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