

Subject card

Subject name and code	Green Logistics, PG_00202541						
Field of study	Economics, International Economic Relations, International Business, Logistics and Mobility						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
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	2		Language of instruction		English		
Semester of study	4		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Rafał Śpiewak				
	Teachers		dr inż. Rafał Śpiewak				
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		95.0	125
Subject objectives	The student understands the complexity of designing and implementing green solutions in logistics, is familiar with examples of their practical application, and is able to solve problems related to managing green logistics processes.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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 participate in the analysis and evaluation of alternative solutions to problems related to green logistics, taking into account their economic, social and environmental impacts, as well as select appropriate methods and instruments supporting the making of rational logistics decisions.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[IBMU2_U01] can creatively interpret, explain and analyse complex economic phenomena and the relations occurring between them, using the acquired knowledge in international business and international economic and financial relations	The student is able to creatively interpret, explain and analyse complex economic phenomena related to the functioning of green logistics in the international business environment, in particular the relationships between logistics processes, international trade, economic conditions and the requirements of sustainable development.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[MSGMU2_W11] has a theoretically grounded, in-depth knowledge of the key issues of managing a business entity on the national and international market and of selected detailed issues of the international supply chain	The student has in-depth theoretical knowledge of green logistics management in domestic and international enterprises and the functioning of sustainable supply chains.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[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 and assess risks related to green logistics in the international operations of enterprises and indicate their consequences and ways of reducing them using appropriate research methods.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[MSGMU2_K05] is ready to initiate actions in the public interest, inspire and organise projects for the benefit of the environment and the international business community, in accordance with the idea of sustainable development and the resulting legal, economic, ecological, political and social requirements	The student demonstrates readiness to initiate and organize activities and projects in the field of green logistics for the public interest, the environment and the sustainable development of the international business environment.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
	[IBL3_W07] knows and understands fundamental dilemmas of contemporary world economy; understands the necessity of sustainable development and corporate social responsibility	The student knows and understands the dilemmas of green logistics in the contemporary global economy and the need to apply the principles of sustainable development and corporate social responsibility in logistics.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[LMMU2_U07] can independently propose solutions to complex logistics and mobility problems, select methods of analysis and conduct conclusive procedures in this respect	The student is able to independently propose and evaluate solutions to complex problems of green logistics and sustainable mobility, using appropriately selected analysis methods and decision-making procedures.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[EKONL3_K06] is willing to be guided in his professional life by business ethics and corporate social responsibility, to respect others and to be loyal to his employer	The student demonstrates readiness for ethical and responsible professional action in the area of green logistics, respecting the principles of corporate social responsibility, stakeholders, the environment and the employer.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
	[LMMU2_U08] can independently analyse logistics and mobility processes and systems, and can perform a theoretically deepened assessment of such processes and systems, using appropriately selected research method	The student is able to independently analyse and evaluate logistics and mobility processes and systems in the context of green logistics, using appropriately selected research methods and taking into account sustainable development criteria.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written

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[IBL3_K05] is ready to perform professional role in responsible manner, abide business ethics and business standards in working environment	The student is ready for responsible professional action in the area of green logistics, in accordance with business ethics, environmental standards and principles of sustainable development.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
[IBMU2_K04] is ready to inspire and organise projects for the benefit of the environment and the international business community, in accordance with the idea of sustainable development	The student demonstrates readiness to initiate, inspire and organize projects in the area of green logistics, serving environmental protection and the sustainable development of the international business community.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
[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 and evaluate solutions to complex green logistics problems, using appropriately selected analysis methods and decision-making procedures.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
[LMMU2_K03] inspires and organises preparation of projects in the field of logistics and mobility, following the idea of sustainable development, reconciling legal, economic, ecological, political and social requirements	The student is able to inspire and organize green logistics projects, combining sustainable development goals with legal, economic, ecological, political and social requirements.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
[MSG3_U06] can identify selected risks related to international operations of enterprises and assess their consequences correctly	The student is able to identify and assess selected environmental, regulatory, economic and operational risks related to green logistics in the international operations of enterprises and determine their consequences for the sustainable management of supply chains.	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
[IBL3_U05] can identify and evaluate selected risks related to international business	The student is able to identify and assess risks related to the implementation of green logistics processes in an international business environment.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
[EKONMU2_K06] is ready to observe and develop in his/her professional life principles of business ethics and corporate social responsibility, respect others, be loyal to their employer, taking into account changing social needs.	The student demonstrates readiness to act ethically and responsibly in the area of green logistics, taking into account corporate social responsibility, social and environmental needs and loyalty to the employer.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
[EKONL3_W08] has an advanced knowledge of the processes of changing elements, enterprises and whole structures of economic organisations, as well as the processes of changing social institutions, knows what their causes, course, scale, consequences are and what the influence of external stakeholders is on them	The student has advanced knowledge of the changes taking place in enterprises and supply chains under the influence of the implementation of green logistics and understands the role of external stakeholders in these processes.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
[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 is able to inspire and organize green logistics projects, combining sustainable development goals with legal, economic, ecological, political and social requirements.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
[MSG3_W08] knows and understands the fundamental dilemmas of contemporary civilisation, including the strategy of sustainable development and corporate social responsibility	The student knows and understands the key dilemmas of green logistics related to sustainable development, environmental protection and corporate social responsibility.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion

	Course outcome	Subject outcome	Method of verification
	[IBMU2_W05] knows and understands in depth the dilemmas of international business related to globalisation, integration, internationalization and sustainable development	The student knows and understands in depth the challenges of green logistics resulting from globalization, integration of international supply chains, internationalization of business activities and the need for sustainable development.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[MSGL3_K03] participates in the preparation of economic and social projects; can reconcile legal, economic, ecological, political and social requirements	The student is able to participate in the preparation of economic and social projects in the area of green logistics, taking into account and balancing legal, economic, environmental, political and social requirements.	[SK1] oral statement/conversation/discussion [SK4] test/exam - oral or written
Subject contents	Poniżej tekst w tym samym stylu edytowania: Zajęcia obejmują analizę współczesnych wyzwań zielonej logistyki, proekologicznych rozwiązań w transporcie, magazynowaniu i logistyce miejskiej, roli operatorów logistycznych w gospodarce o obiegu zamkniętym oraz wpływu regulacji unijnych, ESG, Przemysłu 5.0 i zrównoważonych łańcuchów dostaw na działalność logistyczną. Zajęcia mają charakter projektowy i koncentrują się na identyfikacji problemów, analizie dobrych praktyk oraz opracowywaniu własnych propozycji zielonych rozwiązań logistycznych. Treści: Współczesne wyzwania zielonej logistyki Analiza aktualnych trendów, problemów i kierunków rozwoju logistyki w kontekście transformacji energetycznej oraz odnawialnych źródeł energii. Zielone wdrożenia na rynku transportowym Ocena dynamiki zmian w sektorze transportu, identyfikacja przykładów proekologicznych rozwiązań oraz analiza ich skuteczności. Gospodarka o obiegu zamkniętym w logistyce Rola operatorów logistycznych we wdrażaniu założeń gospodarki o obiegu zamkniętym, w tym projektowanie rozwiązań ograniczających zużycie zasobów i ilość odpadów. Proekologiczne rozwiązania w gospodarce magazynowej Analiza i projektowanie zielonych rozwiązań w magazynowaniu, obejmujących efektywność energetyczną, automatyzację, ograniczanie emisji i optymalizację procesów. Zielona logistyka miejska Przegląd europejskich doświadczeń w zakresie zrównoważonej logistyki miejskiej, w tym dostaw ostatniej mili, stref niskoemisyjnych i rozwiązań dla mobilności miejskiej. Regulacje unijne i ESG w zielonej logistyce Analiza wpływu wymagań Unii Europejskiej, raportowania ESG, koncepcji Przemysłu 5.0 oraz zrównoważonych łańcuchów dostaw na funkcjonowanie przedsiębiorstw logistycznych. Projektowanie zielonych rozwiązań logistycznych Przygotowanie projektów dotyczących usprawnienia procesów transportowych, magazynowych lub dystrybucyjnych z uwzględnieniem kryteriów środowiskowych, ekonomicznych i społecznych. Ocena efektywności i ryzyka zielonych rozwiązań Dobór metod analizy, ocena kosztów, korzyści, ryzyk oraz barier wdrażania rozwiązań proekologicznych w logistyce.		
Prerequisites and co-requisites	Knowledge of the basics of logistics.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Aktywność na zajęciach	51.0%	20.0%
	Test	51.0%	80.0%

Recommended reading	Basic literature	Nikseresht, A., Golmohammadi, D. i Zandieh, M. (2024). Sustainable green logistics and remanufacturing:1. a bibliometric analysis and future research directions. The International Journal of Logistics Management, 35(3), 755-803 Prataviera, L. B., Creazza, A., & Perotti, S. (2024). A call to action: a stakeholder analysis of green logistics practices.2. The international journal of logistics management, 35(3), 979-1008 Chen, B., Liu, F., Gao, Y., & Ye, C. (2024). Spatial and temporal evolution of green logistics efficiency in China and3. analysis of its motivation. Environment, Development and Sustainability, 26(2), 2743-2774
	Supplementary literature	Liu, Q., Hu, W., Dong, J., Yang, K., Ren, R., & Chen, Z. (2025). Cost-benefit analysis of road-underground co-modality 4. strategies for sustainable city logistics. Transportation Research Part D: Transport and Environment, 139, 104585.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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