

Teacher					
Course	SUSTAINABLE LOGISTICS				
Module	Compulsory subjects	ECTS	5	Course code	23SM.P.L.A.19

Major	Speciality	Academic year
Quality	Industrial systems engineering	2023/2024
Semester	THIRD	Year of studies SECOND

Type of studies	Full-time				Extramural			
Type of classes	Lecture	Exercise	Laboratories	Project	Lecture	Exercise	Laboratories	Project
Amount of hours	16	20	14					
TOTAL	50							

Course objectives	The objective of the course is to give students the knowledge of core aspects of sustainable logistics with the business logistics in focus. It will deal with business, policy and tools. Students will be able to analyse relationships between logistics and the environment and the significance of internal coordination in supply chains considering society and business's strive for a sustainable liveability.
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Minimum knowledge required from the student before the classes beginning	
Basic of logistics, basic of supply chain management	

Recommended literature to study before the classes beginning	
It is not required	

LEARNING OUTCOMES			KEK	METHODS OF ASSESSMENT	
KNOWLEDGE	K01	Explains the role of environmental aspects in the supply and demand of logistics services on the market	K2_W01_L_P	EM2 EM12	Written exam with multiple choice Control tests (quizzes)
	K02	Knows the conditions of using sustainable transport and green warehouses	K2_W03_L_P	EM2 EM12	Written exam with multiple choice Control tests (quizzes)
	K03	Can describe the stages of Sustainable Purchasing Processes and the rules of Sustainable Packaging Management	K2_W05_L_P	EM2 EM12	Written exam with multiple choice Control tests (quizzes)
	K04	Can explain the need and principles of waste management and the essence of closed-loop supply chains	K2_W03_L_P K2_W05_L	EM2 EM12	Written exam with multiple choice Control tests (quizzes)
	K05				
SKILLS	S01	Applies in business practice the basic principles, methods and tools applied in sustainable logistics	K2_U01_L_P	EM9	Written tests with practical (computational) tasks
	S02	Can define the requirements for using sustainable transport and green warehouses in a logistics company	K2_U03_L_P K2_U06_L_P	EM9	Written tests with practical (computational) tasks
	S03	Can design Sustainable Purchasing Processes and can follow the rules of Sustainable Packaging Management	K2_U15_L_P	EM9	Written tests with practical (computational) tasks
	S04	Can design waste management processes and uses the closed-loop supply chains	K2_U06_L_P K2_U15_L_P	EM9	Written tests with practical (computational) tasks
	S05				
SOCIAL COMPETENCE	SC01	Is aware of the need for sustainable logistics in all aspects that have a negative impact on the natural environment	K2_K01_L_P	EM14	Continuous assessment (preparation for classes)
	SC02	Inspires his/her business environment to comply with the principles of sustainable logistics, especially where it adversely affects the natural environment	K2_K01_L_P K2_K04_L_P	EM15 EM14	Evaluation of activity in the lab Continuous assessment (preparation for classes)
	SC03				
	SC04				

Course contents	Lecture	1. Concepts of sustainable logistics in the business context 2. The role of environmental aspects in the supply and demand of logistics services on the market 3. Basic principles, methods and tools applied in Sustainable logistics 4. Sustainable transport 5. Green Warehouse 6. Sustainable Purchasing Processes 7. Sustainable Packaging Management 8. Waste management 9. Closed-loop supply chains
	Exercises	In the line with lectures
	Laboratories	In the line with lectures
	Projects	

Teaching methods	TM2	Informational lecture using multimedia techniques
	TM6	Problem lecture using multimedia techniques
	TM10	Case method
	TM16	Laboratories - task and problem solving

Obligatory literature	1	Dekker R., Bloemhof J., Mallidis I., Operations Research for Green Logistics: An Overview of Aspects, Issues, Contributions and Challenges, European Journal of Operational Research, Elsevier, 2018
	2	Bouchery Y., Corbett C.J., Fransoo J.C., Tan T., Sustainable Supply Chains: A Research-Based Textbook on Operations and Strategy, Springer, 2017
	3	European Commission, EU Transport in Figures: Statistical Pocketbook, Publications Office of the European Union, 2023

Additional literature	1	World Bank, Decarbonizing Logistics: Low Carbon Development Pathways for Freight Transport, World Bank Publications, 2019
	2	
	3	

Requirements to pass the course	
1-Class attendance. Each student is entitled to one unexcused absence. Acceptable late to class 15 minutes - after this time the student will not be allowed into the class.	
2-Reports performed during classes.	
3-Active participation and cooperation with the teacher	
4- All students must request to proposed final exam. Each response will be scored 0 - 10 points.	
5- Active participation and cooperation with the teacher is demanded.	