

Subject card

Subject name and code	Climate Changes, PG_00118905						
Field of study	Logistics and Mobility						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		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 Maria Matusiewicz				
	Teachers		dr Maria Matusiewicz				
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 Climate Changes course is to familiarize students with the causes, effects and possible solutions to the problem of climate change. The course aims to understand the mechanisms of global warming and assess the impact of individual economic sectors on the climate - including transport, agriculture, energy and housing. Participants will also analyze the impact of individual consumer decisions and consider real possibilities of combating climate change in the political, social and technological context.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[LMMU2_U13] can manage teamwork as well as interact and work in a team (including in an international environment) assuming a leading role in it	The student is able to lead a team implementing projects related to the analysis and counteracting the effects of climate change.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[LMMU2_K02] is aware of the level of his/her knowledge in the field of logistics and mobility; understands the need to extend and update this knowledge throughout his/her life	The student is aware of the need to constantly expand knowledge about the impact of climate change on logistics and mobility.	[SK1] oral statement/conversation/discussion [SK2] presentation/project/paper/report [SK4] test/exam - oral or written [SK8] observation of student's independent or team work
	[LMMU2_W06] knows statistical and econometric methods and tools for description and macro- and microeconomic modelling of logistics and mobility processes and systems	The student knows statistical and econometric methods to describe and analyze the impact of climate change on economic and logistic systems.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[LMMU2_U04] can forecast and model complex economic and social processes, as well as logistics and mobility processes and systems using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	The student is able to analyse models and forecast the impact of climate change on economic, social processes and mobility systems using statistical and econometric methods.	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
Subject contents	1. Wprowadzenie do zmian klimatycznych 2. Wpływ transportu na zmiany klimatyczne 3. Rola rolnictwa i produkcji żywności 4. Energetyka i jej wpływ na klimat 5. Budownictwo i mieszkalnictwo 6. Indywidualne decyzje i ich wpływ na klimat 7. Możliwości zmiany i działania systemowe 8. Scenariusze przyszłości i perspektywy globalne		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	attendance	51.0%	40.0%
	project presentation	51.0%	40.0%
	discussion participation	51.0%	20.0%
Recommended reading	Basic literature	The IPCC Synthesis Report https://www.ipcc.ch/report/sixth-assessment-report-cycle/	
	Supplementary literature		
	eResources addresses		

Example issues/ example questions/ tasks being completed	1. Explain the greenhouse effect mechanism. Which gases contribute the most to global warming? 2. Which sector of the economy is responsible for the largest CO emissions globally? Justify your answer. 3. What are the main challenges related to decarbonizing the energy sector? 4. Compare the carbon footprint of traditional and plant-based diets. What is its economic significance? 5. What are the economic effects of climate change on developing countries? 6. What is ESG and how does it affect the functioning of companies? 7. How does the European Union's climate policy affect the costs of doing business? 8. Is the transformation towards a green economy economically viable? Justify your answer. 9. What market mechanisms can support the reduction of greenhouse gas emissions? (e.g. ETS, carbon taxes) 10. How do consumer decisions affect climate policy and company strategies? Topics for discussion / essays / term papers: 1. "Is economic growth possible without increasing emissions?" - case study. 2. "Green consumer - real power or marketing myth?" 3. Analysis of the climate policy of a selected country - effectiveness, challenges, economic effects. 4. The role of the financial sector in the fight against climate change: green bonds, ESG investments. 5. Costs of inaction vs. costs of energy transformation. 6. Comparison of climate policies in developed and developing countries. 7. Future scenarios: how will climate change affect labor markets and migration? 8. The impact of climate change on the prices and availability of basic goods (food, energy, water).
Work placement	Not applicable

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