

Subject card

Subject name and code	Logistics and Mobility Modelling, PG_00200430						
Field of study	Logistics and Mobility						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
Education level	Master's studies	Subject group			Obligatory subject group in the field of study 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	1	Language of instruction			English		
Semester of study	1	ECTS credits			3.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Department of Logistics -> Faculty of Economics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Dariusz Weiland				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	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		15.0	75
Subject objectives	The objective of the course is to provide students with knowledge, skills and social competence in the area of logistics and mobility modelling.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[LMMU2_W08] has a knowledge of main and logistics 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	Student has got knowledge on the structure of logistics and mobility processes (events, activities, resources, relations, systems, parameters)	[SW2] presentation/project/paper/report
	[LMMU2_K05] correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession	Student correctly identifies, diagnoses and solves dilemmas and alternative solutions related to the profession, in relation to logistics and mobility	[SK2] presentation/project/paper/report
	[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)	Student can model complex logistics and mobility processes using quantitative and qualitative methods	[SU2] presentation/project/paper/report
[LMMU2_W06] has an in-depth knowledge of statistical and econometric methods and tools for description and macro- and microeconomic modelling of logistics and mobility processes and systems	Student has got knowledge on the methods and tools designed to model the structure of logistics and mobility processes (events, activities, resources, relations, systems, parameters)	[SW2] presentation/project/paper/report	
Subject contents	<p>1. Structure of logistics and mobility processes Main ontologies, processualism, eventism, reism, relationism, systemism, architectures of business processes (ARIS, CIM OSA, Zachman framework), logistics and mobility processes, structure, elements, quantitative and qualitative parameters</p> <p>2. Development of EPC model of logistics or mobility process Methods and tools of logistics or mobility process modelling. Constructing a model of a selected logistics or mobility process according to the EPC standard of modelling</p> <p>3. Analysis of logistics or mobility process model Heuristics, benchmarking, simulation, time/cost/quality analysis</p> <p>4. Improvement of logistics or mobility process Vision, redesigning, reengineering</p> <p>5. Presentation and discussion on the model of improved logistics or mobility process Presentation, estimation, discussion</p> <p>In case of doubts, the Student is aware of the possibility of using consultations.</p>		
Prerequisites and co-requisites	General knowledge on logistics or mobility		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	51.0%	100.0%
Recommended reading	Basic literature	<p>1) Mańkowski C.: Ontological Foundations for Business Logistic Process Modeling. "Railway Transport and Logistics" 2007, no. 2, p. 30-38. Available at the teacher portal</p> <p>2) Mańkowski C.: Architectures of logistics processes and systems, Transport Economics and Logistics, Gdańsk University Press, vol. 68, 2017, p. 25-38. Available at the teacher portal</p> <p>3) Mańkowski C., Charłampowicz J.: Managing maritime container ports sustainability: a reference model. "Sustainability", MDPI, vol. 13, nr 18, 2021, p. 1-15. Available HERE</p>	
	Supplementary literature	<p>Http://www.ariscommunity.com</p> <p>Https://scor.ascm.org/</p> <p>Http://www.softwareag.comHttp://www.idef.com</p> <p>Http://www.wonderware.com</p>	
	eResources addresses		

<p>Example issues/ example questions/ tasks being completed</p>	<p>What is the name of the logistics or mobility process selected to model?</p> <p>What event/s activate/s activity/es of the selected process?</p> <p>What human, material, info or money resources are needed to perform the activity/es, and where they are output from?</p> <p>What human, material, info or money resources are output of the activity/es performance, and where they are input to?</p> <p>What event/s are activated by the activity/es performance?</p> <p>What are parameters of events, activities, resources, relations of the modeled logistics or mobility process?</p> <p>Jak nazywa się proces logistyki lub mobilności wybrany do modelowania? Jakie zdarzenie/a aktywują czynności wybranego procesu? Jakie zasoby ludzkie, materialne, informacyjne lub pieniężne są potrzebne do wykonania działań i skąd pochodzą? Jakie zasoby ludzkie, materialne, informacyjne lub pieniężne stanowią wynik działania, i gdzie są one wprowadzane? Jakie zdarzenia są aktywowane przez wykonane działania? Jakie są parametry wydarzeń, działań, zasobów modelowanego procesu logistyki lub mobilności?</p>
<p>Work placement</p>	<p>Not applicable</p>

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