University of Gdańsk

Subject card

Subject name and code	Designing Logistic Support, PG_00199361						
Field of study	Economics						
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 Optional subject group 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		Polish		
Semester of study	2		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 Patryk Wierzbowski				
	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	Prepare students in terms of knowledge, skills and social competence to use modern methods and tools for designing logistics systems that support other economic systems (production, trade, services) with all necessary resources.						

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 understands the essence of describing the course of economic processes. The student understands the process and system approach to the functioning of any organization.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[EKONMU2_U04] can forecast and model complex economic and social processes using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	The student is able to use IT tools to map and describe the flow of economic processes or systems. The student prepares a project in a team of 2–3 people on the topic of modeling logistics processes using elements of BPMN notation. The project is discussed and approved during classes, consultations with the instructor, or project sessions, and then presented in class. The student is able to identify, describe, and map a selected logistics process, present its flow in the form of a process model, and justify the chosen solutions. The student prepares an individual project (model) on modeling logistics support using EPC notation. The model is discussed and reviewed during class, in consultations with the instructor, or during project sessions, and is then presented by the student in class. The student is able to independently describe and model a selected area of logistics support, identify its main events, functions, necessary resources, and dependencies, and justify the structure of the prepared model.	[SU2] presentation/project/paper/ report [SU8] observation of student's independent or team work
	[EKONMU2_K05] correctly identifies, diagnoses and solves advanced dilemmas and alternative solutions related to the profession	The student undertakes the tasks set before him and solves them creatively.	[SK2] presentation/project/paper/ report [SK8] observation of student's independent or team work

<table>
<tr><td>Subject contents</td><td>1. Object design as a research method. Realism, evidentialism, processualism, relationalism, systemism as ontological bases of design. The process of design. Design. Systematization of design.

2. Design architectures and standards Design architectures (IFIG, IDEF, ARIS, CIM OSA, Zachman's framework). Design standards (EPC, BPMN, UML, BPEL, WSDL).

3. Logistics support system as a design object Logistics. Logistics support system. Systemization of logistics systems and processes. Structure of logistics systems. Structure of logistics processes. Events, functions, resources, relationships, parameters.

4 Methods and tools for designing logistics support systems Sankey diagram. Aris Easy Design. Aris Express.

5. Design of a logistics process model (team project).

6. Design of the reference model of the logistics support system - construction of the model (individual project).

7. Presentation of models by students.

Any doubts regarding the issues discussed during classes can be discussed during consultations.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>The ability to view economic events and processes in a systemic way.</td></tr>
<tr><td>Assessment methods and criteria</td><td><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Team project</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>Individual project presentation</td><td>51.0%</td><td>10.0%</td></tr>
<tr><td>Individual project</td><td>51.0%</td><td>40.0%</td></tr>
</table></td></tr>
<tr><td>Recommended reading</td><td><table>
<tr><td>Basic literature</td><td>1) Mańkowski C.: Modelowanie procesów logistycznych. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020.

2) Gabryelczyk R.: Aris w modelowaniu procesów biznesu. Difin. Warszawa 2006.

3) Mańkowski C.: Ontological Foundations for Business Logistic Process Modeling. "Railway Transport and Logistics" 2007, no. 2, p. 30-38.</td></tr>
<tr><td>Supplementary literature</td><td>1) Rosing M., A-W. Scheer, H. Scheel: The Complete Business Process Modeling Handbook. Body of Knowledge from Process Modeling to BPM (Volume 1). Morgan Kaufmann, Waltham 2015. Available

2) Mańkowski C., Charłampowicz J.: Managing maritime container ports sustainability: a reference model. "Sustainability", MDPI, vol. 13, nr 18, 2021, p. 1-15. Artykuł jest dostepny</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
</table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Project of a reference model for a logistic support system - constructing a model for a selected company providing services or manufacturing goods.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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