

**Subject card**

<b>Subject name and code</b>	Logistic systems , PG_00198991						
<b>Field of study</b>	Economics						
<b>Date of commencement of studies</b>	October 2026	<b>Academic year of realisation of subject</b>			2028/2029		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	3	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	5	<b>ECTS credits</b>			4.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Department of Logistics -> Faculty of Economics -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Cezary Mańkowski				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	15.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM		
	<b>Number of study hours</b>	30	4.0	66.0	100		
<b>Subject objectives</b>	Presenting students the concept of logistics systems. Systematizing logistics systems. Discussing the structure of logistics systems						
<b>Learning outcomes</b>	<b>Course outcome</b>	<b>Subject outcome</b>			<b>Method of verification</b>		
	[EKONL3_W02] has an advanced knowledge of the different types of existing business entities and organisations and public institutions	Has advanced knowledge of logistics systems of economic entities and public institutions			[SW4] test/exam - oral or written		
	[EKONL3_U06] uses the knowledge acquired in economics, finance and management to solve economic and social dilemmas arising in the professional context	Uses knowledge of economics, finance and management to solve problems related to logistics systems that arise in the professional work of a logistician			[SU4] test/exam - oral or written		
	[EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions	Correctly identifies, diagnoses and resolves dilemmas and various solution options related to the profession of a logistician			[SK4] test/exam - oral or written		
	[EKONL3_W03] knows the relations between economic agents and social organisations operating in the national, international and intercultural arenas	Has advanced knowledge of the relationships between economic entities and social organizations operating in the sphere of national or international logistics systems			[SW4] test/exam - oral or written		

Subject contents	<p><b>1. The essence of logistics systems</b> Concept, features and types of systems, classification criteria of logistics systems, structures of logistics systems</p> <p><b>2. Components of logistics systems</b> Events. Processes. Resources. Relations. Parameters. Elements of the market environment of logistics systems</p> <p><b>3. Methods and tools for designing logistics systems</b> Ontologies, architectures, standards, IT tools (Design Thinking, Sankey Schema, Aris)</p> <p>Any doubts regarding the issues discussed during classes can be discussed during consultations.</p>								
Prerequisites and co-requisites	Basic economic knowledge								
Assessment methods and criteria	<table border="1" data-bbox="451 663 1487 730"> <thead> <tr> <th data-bbox="451 663 798 696">Subject passing criteria</th> <th data-bbox="805 663 1141 696">Passing threshold</th> <th data-bbox="1149 663 1487 696">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 707 798 730">Test</td> <td data-bbox="805 707 1141 730">51.0%</td> <td data-bbox="1149 707 1487 730">100.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Test	51.0%	100.0%
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Test	51.0%	100.0%							
Recommended reading	Basic literature	<ol style="list-style-type: none"> <li>1. Chaberek M.: Makro- i mikroekonomiczne aspekty wsparcia logistycznego. Wyd. Uniw. Gdańskiego, Gdansk 2002</li> <li>2. Blaik P.: Logistyka. PWE, Warszawa 2010</li> <li>3. Mańkowski C.: Modelowanie procesów logistycznych. Wydawnictwo Uniwersytetu Gdanskiego, Gdańsk 2020 (<a href="#">Tutaj</a>)</li> </ol>							
	Supplementary literature	<ol style="list-style-type: none"> <li>1. Logistyka. Red. S. Krzyżaniak, D. Kisperska-Moroń. ILiM, Poznan 2009</li> <li>2. Weiland, D., Wierzbowski, P., Logistyka informacji w Gospodarce 4.0. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020 (<a href="#">Tutaj</a>)</li> <li>3. Mańkowski C.: Synergia w logistyce. Wyd. Uniw. Gdańskiego, Gdańsk 2010</li> <li>4. Twaróg J.: Koszty logistyki przedsiębiorstw. ILiM, Poznań 2003</li> <li>5. Twaróg J.: Mierniki i wskaźniki logistyczne. ILiM, Poznań 2005</li> <li>6. Beier F., Rutkowski K.: Logistyka. Wydaw. SGH, Warszawa 2005</li> <li>7. Jacyna M., Lewczuk K., Projektowanie systemów logistycznych, PWN, Warszawa 2016</li> <li>8. Czasopisma: Logistyka; Logistyka a Jakość; Eurologistics; Gospodarka</li> <li>9. Materiałowa i Logistyka; Spedycja, Transport, Logistyka</li> <li>9. Portale: <a href="http://www.ptl.net.pl">www.ptl.net.pl</a>, <a href="http://www.logistyka.net.pl">www.logistyka.net.pl</a>, <a href="http://ariscommunity.com">ariscommunity.com</a></li> </ol>							
	eResources addresses								
Example issues/ example questions/ tasks being completed	<p>Types of logistics systems</p> <p>Logistics system components</p> <p>Methods and tools for designing logistics systems</p>								
Work placement	Not applicable								

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