

Subject card

Subject name and code	Methods and Tools of Economic System Description, PG_00169901						
Field of study	Economics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	3		ECTS credits		1.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Patryk Wierzbowski				
	Teachers		mgr Patryk Wierzbowski				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15		5.0		5.0	25
Subject objectives	To familiarize students with methods and tools for describing economic systems.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[EKONL3_U02] is able to use the knowledge of theory and data to analyse concrete economic and social processes and phenomena and to analyse these phenomena using methods developed in economics, finance and management sciences	The student is able to organize and present statistical data and apply appropriate measures of their statistical description. The student is able to use computer tools for mapping and describing the course of economic processes or systems.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONL3_U07] is able to participate in analyses and evaluations of alternative solutions to economic and social problems and to choose the methods and instruments to resolve them rationally	The student understands the meaning of the basic concepts of descriptive statistics. 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.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONL3_W06] have an advanced knowledge of selected methods and tools, including statistical and econometric techniques, for describing economic agents and structures as well as social institutions and the processes taking place in them	The student understands the meaning of the basic concepts of descriptive statistics. 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.	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion [SW2] presentation/project/paper/report
	[EKONL3_U09] is able to prepare written work, in Polish and in a foreign language, on specific economic and social issues, using specialist terminology, theoretical and methodological approaches, principles of collecting data from various sources, their description and interpretation, making inferences based on scientific literature and factual data, and making international comparisons	The student understands the meaning of the basic concepts of descriptive statistics. 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.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONL3_U10] has the ability to prepare oral presentations, in Polish and in a foreign language, on economic and social issues, using specialist terminology, theoretical approaches, principles of collecting various sources of data, their description and interpretation, and making inferences from scientific literature, and is able to take an active part in a debate	The student understands the meaning of the basic concepts of descriptive statistics. 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.	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[EKONL3_U04] can predict and forecast the course of economic and social processes and phenomena	The student understands the meaning of the basic concepts of descriptive statistics. 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.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions	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

Subject contents	1. Tabular and Graphical Data Presentation: Statistical inference vs. descriptive statistics. Presentation of tools used for statistical description, including IT tools (Microsoft Excel). Unordered frequency distribution, ordered frequency distribution, point frequency distribution, interval frequency distribution, diagram, histogram, frequency polygon, frequency curve, pie chart of frequencies and percentage shares, bar chart. 2. Basic Measures of Economic System Description. Measures of central tendency, measures of variability, skewness, and concentration. 3. Examination of Interrelationships within Economic Systems. Correlation analysis, regression analysis. 4. Study of the dynamics of economic phenomena. The nature of time series, absolute and relative growth, indices, time series decomposition. In order to deepen the concepts discussed during lectures, students have the opportunity to participate in consultations		
Prerequisites and co-requisites	Computer proficiency, basic knowledge of spreadsheet software, fundamental understanding of economics and management, and the ability to apply mathematics in economics and management.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	team project	51.0%	50.0%
	final exam	51.0%	50.0%
Recommended reading	Basic literature	1. W. Makać, D. Urbanek-Krzysztofak: Metody opisu statystycznego. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk, 2020 2. C. Mańkowski: Modelowanie procesów logistycznych. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020 3. L. Reszka: Decyzje menedżerskie w logistyce. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2019	
	Supplementary literature	1. A. Wojna: Wykłady z podstaw statystyki. Cz. 1, Opis statystyczny. Wydawnictwo Uczelniane Politechniki Koszalińskiej, Koszalin 2011 2. B. Pułaska - Turyna: Statystyka dla ekonomistów. Wydawnictwo Difin, Warszawa 2011 3. J. Józwiak, J. Podgórski: Statystyka od podstaw. Polskie Wydawnictwo Ekonomiczne, Warszawa 2012 4. A. Maksymowicz-Ajchel: Wstęp do statystyki. Metody opisu statystycznego. Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2020	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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