University of Gdańsk

Subject card

Subject name and code	Methods and Tools of Economic System Description, PG_00199934						
Field of study	International Economic Relations						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2027/2028			
Education level	Bachelor'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	part-time studies		Mode of delivery	at the university			
Year of study	2		Language of instruction	Polish			
Semester of study	3		ECTS credits	3.0			
Learning profile	academic		Assessment form	exam			
Conducting unit	Department of Logistics -> Faculty of Economics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Cezary Mańkowski, prof. UG				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	10.0	0.0	6.0	0.0	26
	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	26		0.0	49.0	75	
Subject objectives	To introduce students to methods and tools for describing economic systems						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[MSGL3_U12] can prepare written assignments concerning detailed problems of international economic relations (in connection with the chosen speciality within International Economic Relations), using specialist terminology, theoretical and methodological approaches, principles of collecting data from various sources, their description and interpretation, principles of formulating research theses, drawing conclusions on the basis of scientific literature and factual data, and making international comparisons	Students can prepare written work in the form of a model of a selected economic system, using professional terminology. Students discuss its assumptions and progress with the teacher during consultations and project blocks. Project blocks are included in the class schedule, and consultation dates and locations are published on the University of Gdańsk website.	[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
[MSGL3_K05] correctly identifies, diagnoses and solves dilemmas and various options of solutions related to the profession	The student correctly identifies, diagnoses and resolves dilemmas and different options for solutions related to the economics profession	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written [SK8] observation of student's independent or team work
[MSGL3_U10] can take an active part in a debate, presenting his/ her own viewpoint and supporting it with argumentation based on selected theories, opinions of various authors and/or statistical data	The student is able to take an active part in a debate on ways of describing economic systems and present his/her own standpoint, supporting it with argumentation based on selected theories, views of various authors and/or statistical data.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
[MSGL3_U08] uses methods and computer programmes as well as marketing techniques and tools to acquire and analyse data necessary in his/her professional work to diagnose economic processes and make adequate economic decisions	The student is able to use basic methods and tools for the description of international economic systems, including IT tools and data acquisition techniques as well as marketing tools in order to diagnose economic processes and make appropriate economic decisions.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
[MSGL3_U02] can assess economic and social phenomena occurring in an open economy, interpret necessary statistical data and economic indicators, as well as forecast economic phenomena and processes, using standard methods and tools applied in economic sciences	The student is able to assess economic and social phenomena taking place in an open economy, interpret statistical data and economic indicators necessary in this respect, as well as forecast economic phenomena and processes using standard quantitative and qualitative methods and tools.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work
[MSGL3_W10] has an advanced understanding of selected methods and tools, including IT tools and data acquisition techniques, which make it possible to describe and analyse economic entities operating on the international market; knows the processes and phenomena occurring in them and between them, and processes supporting decision-making	The student is familiar with the basic methods and tools for describing international economic systems, including IT tools and data acquisition techniques, which make it possible to describe and analyse economic entities operating on the international market, as well as processes and phenomena taking place within and between them, and which support decision-making processes.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[MSGL3_U13] can prepare presentations and oral speeches on selected specific problems concerning international economic relations (in connection with the chosen speciality within International Economic Relations), using theoretical approaches, specialist terminology, principles of collecting data from various sources, their description and interpretation, and drawing conclusions based on scientific literature	The student has the ability to prepare presentations and oral presentations in the form of a verbal description of economic systems using specialised thermonology	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written [SU8] observation of student's independent or team work

Subject contents	**1. The economic system as an object of description** Ontology (realism, evidentialism, processualism, relationalism, systemism), elements of the economic system (resources, events, processes, relations), the economic system as a holon, characteristics (properties, variables) of the economic system, measures of characteristics of the economic system, methods and tools of ontological description of economic systems **2..Tabular and graphical presentation of data** .Statistical inference vs. descriptive statistics. Presentation of tools used for statistical description, including IT tools (Microsoft Excel, Statistica). Unordered enumeration series, ordered enumeration series, point and interval series, diagram, histogram, frequency polygon, abundance curve, pie chart of abundance and percentages, bar chart **3. Basic measures for describing an economic system** Measures of central tendency, measures of: diversity, skewness, concentration **4. Analysis of interdependence of economic system characteristics** Correlation analysis, regression analysis **5. Analysis of the dynamics of economic phenomena** The essence of time series, absolute and relative growth, indices, time series decomposition Topic no. 1 will be realised in class using the ARIS Express tool. Topics 2 to 5 will be covered in class using Microsoft Excel and Statistica (beginner level). Any doubts arising during the implementation of the subject matter or interpretation issues will be resolved during consultations.
Prerequisites and co-requisites	Application of mathematics in economics and management, Information technology, Macroeconomics I, Microeconomics I, Management. Computer literacy, basic spreadsheet knowledge, basic knowledge of economics and management ability to apply mathematics in economics and management.
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
project	51.0%	50.0%
written test	51.0%	50.0%

Recommended reading	Basic literature	***Literatura podstawowa*** 1. W. Makać, D. Urbanek-Krzysztofiak: *Metody opisu statystycznego*. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk, 2020 2. C. Mańkowski: Modelowanie procesów logistycznych. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020 (do pobrania tutaj/zakładka TREŚĆ) 3. L. Reszka: *Decyzje menedżerskie w logistyce.* Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2019 (do pobrania tutaj/ zakładka TREŚĆ) 4. Portal edukacyjny www.ariscommunity.com

	Supplementary literature	***Literatura uzupełniająca*** 1. C. Mańkowski: Ontological Foundations for Business Logistic Process Modeling. "Railway Transport and Logistics" 2007, no. 2, p. 30-38 2. A. Wojna: *Wykłady z podstaw statystyki. Cz. 1, Opis statystyczny*. Wydawnictwo Uczelniane Politechniki Koszalińskiej, Koszalin 2011 3. B. Pułaska - Turyna: *Statystyka dla ekonomistów*. Wydawnictwo Difin, Warszawa 2011 4. J. Jóźwiak, J. Podgórski: *Statystyka od podstaw*. Polskie Wydawnictwo Ekonomiczne, Warszawa 2012 5. A. Maksymowicz-Ajchel: *Wstęp do statystyki. Metody opisu statystycznego.* Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2020 6. M. Kowalski: *Podstawy statystyki opisowej dla ekonomistów*. Wydawnictwo Wyższej Szkoły Bankowej, Poznań - Chorzów 2006
	eResources addresses	
Example issues/ example questions/ tasks being completed	-	
Work placement	Not applicable	

Document generated electronically. Does not require a seal or signature.