

Subject card

Subject name and code	Instruments for Economic Research, PG_00170499						
Field of study	International Economic Relations						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2025/2026		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study		
Mode of study	part-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		1.0		
Learning profile	academic		Assessment form				
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Wojciech Bizon				
	Teachers		dr Dominik Aziewicz				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	10.0	0.0	0.0	0.0	10
	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	10		8.0		7.0	25
Subject objectives	The aim of the course is to provide students with the necessary knowledge and skills in using available tools in conducting economic research necessary in the development of diploma theses, as well as to familiarize them with the possibilities of using Statistica and Excel programs in advanced data analyses.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MSGMU2_U06] can identify types of risks related to international operations of enterprises and correctly determine their consequences and methods of mitigation, with a skilful application of theory, using appropriate research method	the student is able to identify the types of risks related to the international activities of enterprises and correctly determine their consequences and methods of limiting them, with the skilful use of theory and the application of the appropriate research method	[SU4] test/exam - oral or written [SU5] implementation of a problem task
	[MSGMU2_U02] can observe, evaluate and critically analyse the causes and course of processes and phenomena taking place in the open economy; can formulate his/her own opinions on the subject, interpret statistical data and economic indicators necessary in this respect, and also forecast economic processes and phenomena using advanced methods and tools applied in economic sciences	the student is able to observe, evaluate and critically analyze the causes and course of processes and phenomena occurring in the open economy, is able to formulate their own opinions on this subject, interpret the statistical data and economic indicators necessary in this respect, and also forecast economic processes and phenomena using advanced methods and tools used in economic sciences	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[MSGMU2_U13] has a thorough ability to prepare specialist written work on economic and social issues, using specialist theoretical and methodological approaches, collecting data from various sources, their description and interpretation, the principles of hypothesis formulation and drawing conclusions on the basis of scientific literature and factual data, and can perform advanced international comparisons	the student has an in-depth ability to prepare specialist written works in Polish and a foreign language on economic and social issues, using specialist theoretical and methodological approaches, collecting various data sources, describing and interpreting them, principles of formulating hypotheses and drawing conclusions based on scientific literature and factual data, is able to make advanced international comparisons	[SU1] oral statement/conversation/discussion [SU4] test/exam - oral or written
	[MSGMU2_U14] has a thorough ability to prepare specialist oral presentations on economic and social issues, using specialist theoretical approaches, the principles of collecting data from various sources, their description and interpretation, and drawing conclusions on the basis of scientific literature; can prepare and lead a debate	the student has in-depth skills in preparing specialist oral presentations, principles of collecting various data sources (including statistical data), their description and interpretation, and drawing conclusions using statistical tools	[SU1] oral statement/conversation/discussion
	[MSGMU2_U01] can creatively interpret and explain complex and atypical economic phenomena and the relations occurring between them, using the acquired knowledge in economics, finance and international economic relations	the student is able to creatively interpret and explain complex and unusual economic phenomena and the relationships between them, using their knowledge of economics, finance and international relations	[SU1] oral statement/conversation/discussion [SU5] implementation of a problem task
	[MSGMU2_U09] can innovatively solve problems in the field of international economic relations and the functioning of economic entities on the international market, adapting existing or developing new methods and tools	the student is able to innovatively solve tasks in the field of international economic relations and the functioning of economic entities on the international market, adapting existing or developing new methods and tools	[SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[MSGMU2_U10] can accurately select and use sources of information on international economic relations, evaluate, critically analyse and creatively interpret them, and can present them in an innovative way, using advanced information and communication techniques	the student is able to properly select and use sources of information on international economic relations, evaluate them, critically analyze them and interpret them creatively, and is able to present them in an innovative way, using advanced information and communication techniques	[SU1] oral statement/conversation/discussion [SU8] observation of student's independent or team work
	[MSGMU2_K01] is ready to recognise the importance of knowledge of economics in the process of identifying and solving problems in the area of international economic relations and to consult experts in case of difficulties in solving them independently	the student is understand the importance of knowledge in the field of economics in the process of identifying and solving problems in the area of international economic relations and to seek expert opinions in the event of difficulties in solving them independently	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work

	Course outcome	Subject outcome	Method of verification
	[MSGMU2_K06] is ready to independently identify, diagnose and responsibly resolve dilemmas and alternative solutions related to his/her profession and the development of professional achievements	the student is ready to independently identify, diagnose and responsibly resolve dilemmas and various variants of solutions related to the performance of the profession and the development of professional achievements	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[MSGMU2_U11] independently formulates and tests hypotheses related to simple research problems, appropriately selects and applies methods and tools, including statistical tools and data acquisition techniques in order to verify hypotheses and diagnose economic processes, and on this basis to take appropriate economic decisions	the student independently formulates and tests hypotheses related to simple research problems, properly selects and applies methods and tools, including statistical tools and data acquisition techniques in order to verify hypotheses and diagnose economic processes and, on this basis, make appropriate economic decisions	[SU4] test/exam - oral or written [SU8] observation of student's independent or team work
	[MSGMU2_K02] is ready to critically assess the level of acquired knowledge, skills and professional competence in the area of international economic relations	the student is ready to critically evaluate the level of knowledge, skills and professional competences in the area of international economic relations	[SK1] oral statement/conversation/discussion
	[MSGMU2_W13] knows and understands methods and tools for describing economic phenomena, including data acquisition techniques, which make it possible to describe and analyse economic entities functioning on the international market as well as processes and phenomena occurring in them and between them, and also those supporting decision-making processes	the student knows and understands the methods and tools for describing economic phenomena, including techniques for obtaining statistical data, allowing the description and analysis of economic entities operating on the international market and the processes and phenomena occurring in them and between them, as well as supporting decision-making processes in the enterprise	[SW1] oral statement/conversation/discussion [SW5] implementation of a problem task
Subject contents	Research plan. Research objective and hypotheses. Designing an economic study. Data and their sources. Qualitative and quantitative research. Qualitative research in practice. Observation. Individual interview. Group interviews (focus groups). Experiment. (lecture 2 h) Quantitative research in economic practice. The concept and properties of the normal distribution. Other distributions of variables. Statistical hypotheses and their verification. Statistical significance. Statistical tests. Generalization of results. (lecture 2 h + computer lab 2 h) Tools supporting data analysis - STATISTICA (data analysis software system). StatSoft, Inc.: presentation of the Statistica program as a tool supporting the analysis of macroeconomic and microeconomic data. Performing tasks using statistical methods, performing analyses using Excel. (computer lab 2h) Analysis of the interdependence of economic phenomena. Using knowledge about correlation and regression in the economy and enterprise. Scatter plot. Pearson and Spearman correlation coefficients. Determined and explanatory variable. Regression function. (lecture 2 h + computer lab 2 h) Evaluation of the effectiveness of changes in economic parameters. Comparisons with groups. Tests for independent and dependent samples. (lecture 2 h + computer lab 2 h) Searching for similar economic systems and market segmentation. Cluster analysis - multi-aspect grouping of objects. Spatial differentiation of economic variables. Methods of optimal distribution. K-means method. (lecture 2 h + computer lab 2 h) Creating research questionnaires. Analysis of reliability and position. Cronbach's alpha. Elements of factor analysis. Bartlett's and KMO tests. The shape of questions in the questionnaire. (lecture 4 h + computer lab 4h) Any doubts related to the lecture topics and questions regarding the course material are addressed during consultation hours. Participation in consultations enables the clarification of substantive issues and deepens the understanding of subject-related concepts.		
Prerequisites and co-requisites	Basic knowledge of descriptive statistics and mathematical analysis.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		51.0%	100.0%
Recommended reading	Basic literature Balicki A., Makać W., Metody wnioskowania statystycznego, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2007. Sobczyk M., Statystyka matematyczna, Wydawnictwo C.H. Beck, Warszawa 2010. Rószkiewicz M., Metody ilościowe w badaniach marketingowych, Wydawnictwo Naukowe PWN, Warszawa 2002 lub 2014.		

	Supplementary literature	Stanisz A., Przystępny kurs statystyki z zastosowaniem STATISTICA PL na przykładach z medycyny, StatSoft Polska, Kraków 2006. Internetowy Podręcznik Statystyki, http://www.statsoft.pl/textbook Bizon W., Dobrobyt społeczno-ekonomiczny oraz gospodarka oparta na wiedzy w kontekście historycznych podziałów na Polskę A i Polskę B, "E-mentor" nr 4/2011. Bizon W., Pomiar efektywności nauczania opartego na symulacjach biznesowych i studiach przypadków, [w:] A. Poszewiecki, W. Bizon, P. Kulawczuk [red.], Symulacje menedżerskie i studia przypadków. Szkolenia biznesowe w oparciu o symulacje menedżerskie i studia przypadków najlepsze praktyki, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2012.
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Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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