University of Gdańsk

Subject card

Subject name and code	Statistics in administration - auditorium classes, PG_00132146						
Field of study	Law in administration and economy						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2027/2028			
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	2		Language of instruction	Polish polish			
Semester of study	4		ECTS credits	2.0			
Learning profile	academic		Assessment form	exam			
Conducting unit	Faculty of Law and Administration -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Dorota Banaszkiewicz				
	Teachers						
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		0.0	40.0	50	
Subject objectives	1. Gaining knowledge about the sources of data on economic, social, and population phenomena and how they are generated, as well as the knowledge necessary to conduct statistical research and data analysis. 2. Developing skills in selecting appropriate methods for analyzing economic and social phenomena and interpreting the obtained results. 3. Learning about the potential applications of statistical methods in economic and social life, in administrative, social, and business decision-making.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[PAGMU2_K02] is willing to use the knowledge and skills acquired in social activities; he is also ready to initiate the pursuit of the public interest, particularly through substantive support for a specific organization, performing his profession diligently and ethically; he is prepared to carry out tasks in the organization in an entrepreneurial manner.	The student knows the reporting obligations of various institutions to the Central Statistical Office. The student knows the flow of data between institutions, i.e., primary data sources, e.g., PUP reports. The student knows what primary and secondary data are and knows the methods of data collection. The student knows the national accounts system.	[SK4] test/exam - oral or written
[PAGMU2_U05] at an advanced level, is able to independently and critically acquire knowledge and develop his professional skills. Additionally, he is aware of the level of his knowledge and skills and understands the need for lifelong learning and sharing the knowledge he acquires with others.	The student knows basic methods of statistical data analysis and can interpret the results, Is familiar with the sources of statistical information, Is able to describe data found in a graph and statistical table.	[SU4] test/exam - oral or written
[PAGMU2_U02] is able to communicate professionally on issues related to administration and the economy, including formulating clear messages for both specialists and non-specialists in administration. He can also prepare an independent, in-depth written report and an oral presentation on topics related to administration and the economy.	Student knows the sources of information on data related to public finances	[SU1] oral statement/conversation/ discussion
[PAGMU2_W01] at an advanced level, identifies and understands the facts, phenomena, and their interactions related to the functioning of public authorities, administration, civil servants, the economy, and economic entities. He also knows the terminology, methods, and theories derived from legal sciences and related disciplines, relevant to issues concerning administration and the economy.	The student understands the principles of conducting statistical research by institutions such as the Central Statistical Office and EUROSTAT.	[SW1] oral statement/ conversation/discussion

Subject contents

I. Introductory Issues and Structure Analysis
- Concepts and methods of statistics, applications of statistics, basic concepts, statistical research (types, stages).
- Data presentation: series, tables, graphs.
- Analysis of distribution properties: central tendency, dispersion, asymmetry. Structural similarity index.

II. Interdependence analysis
- Correlation of quantitative characteristics - Pearson's linear correlation coefficient.
- Correlation of qualitative characteristics - Cramer's V coefficient.
- Correlation of ordinal characteristics - Spearman's rank correlation coefficient.

III. Analysis of changes over time
- The nature and types of time series, graphical presentation.
- Measures of the average level of a phenomenon in time series.
- Dynamics analysis: individual dynamics indices.

Prerequisites and co-requisites

Ability to use Excel.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
term paper	51.0%	50.0%
test	51.0%	50.0%

Recommended reading

Basic literature	Makać W., Urbanek-Krzysztofiak D., Methods of Statistical Description, UG Publishing House, Gdańsk [last edition] Aczel A. D., Statistics in Management, PWN, Warsaw [last edition] Kot S. M., Jakubowski J., Sokołowski A., Statistics. A Handbook for Economic Studies, Difin, Warsaw [last edition] Illowsky B., Dean S., Introductory Statistics, openstax, Houston [last edition], https://openstax.org/details/books/introductory-statistics
Supplementary literature	Hans Rosling, Ola Rosling, Anna Rosling-Ronnlund: Factfulness. Why the world is better than we think. Or how to replace stereotypes real knowledge, Publisher: Media Rodzin; 2018 Daniel Kahneman: Thinking traps. About thinking fast and slow; Publisher: Media Rodzina; 2012 Mirosław Szreder:"Lost in numbers", Tygodnik Powszechny;24/12/2019
eResources addresses	

Example issues/ example questions/ tasks being completed	1. In what situations is it not recommended to calculate the average level of a characteristic? 2. What variable is the student's study time (in hours)? 3. What correlation coefficient should be used to determine whether there is a correlation between gender and the choice of field of study?
Work placement	Not applicable

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