University of Gdańsk

Subject card

Subject name and code	Elements of statistics and quantitative data analysis - auditorium classes, PG_00177046						
Field of study	Sociology						
Date of commencement of studies	October 2027		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	full-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	Polish			
Semester of study	1		ECTS credits	3.0			
Learning profile	academic		Assessment form	credit			
Conducting unit	Institute of Sociology -> Faculty of Social Sciences -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Maciej Brosz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	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	30		4.0	41.0	75	
Subject objectives	The main objective of the course is to equip students with the knowledge and skills necessary to conduct sociological research using advanced statistical tools (measures), interpret the obtained results and formulate final conclusions based on the analysis and interpretation of independently generated statistical material.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[SOCMU2_U08] The graduate is able to analyse and understand many current social phenomena in the context of knowledge about the mechanisms of human activity, the impact of a group on an individual, the processes of change in Polish, European and world society, and is able to relate his/her understanding of these phenomena to theoretical explanations and results of social research	Is able to analyse and understand many current social phenomena in the context of knowledge about the mechanisms of human action, the impact of a group on an individual, the processes of change in Polish society, Europe and the world, is able to relate his/her understanding of these phenomena to theoretical explanations and the results of social research.	[SU2] presentation/project/paper/report
[SOCMU2_W06] The graduate has in-depth knowledge and understanding of quantitative and qualitative methods of sociological research, including observation, interview, document analysis and desk research, and how to develop and report research findings	Knows and understands in-depth the methods of quantitative and qualitative sociological research, including observation, interviews, analysis of documents and secondary sources, and knows the methods of developing and reporting research results.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[SOCMU2_U07] The graduate is able to independently propose solutions to a specific problem in the field of sociology based on carrying out appropriate research procedures	Is able to independently propose solutions to a specific problem in the field of sociology based on conducting appropriate research procedures.	[SU2] presentation/project/paper/report
[SOCMU2_U06] The graduate uses the acquired knowledge to solve dilemmas arising in professional work, can critically evaluate the effectiveness and usefulness of sociological knowledge in various areas of work	Uses acquired knowledge to resolve dilemmas arising in professional work and is able to critically assess the effectiveness and usefulness of sociological knowledge in various areas of work.	[SU2] presentation/project/paper/report
[SOCMU2_K02] The graduate recognizes and correctly solves dilemmas connected with his/her profession	Recognizes and accurately resolves dilemmas related to the practice of one’s profession.	[SK8] observation of student's independent or team work

Subject contents

1. Introduction: a review of issues in the field of research methodology in the social sciences. A basic set of statistical concepts.
2. Introduction to SPSS: creating and loading data sets, basic operations on data sets.
3. Descriptive statistics. Testing hypotheses.
4. Detecting relationships between variables: contingency tables; chi-square test of independence.
5. Detecting relationships between variables: Pearson, Spearman, Kendall correlation analysis.
6. Regression analysis.
7. Student's t-test for dependent and independent samples.
8. Nonparametric equivalents of the Student's t-test.
9. One-way analysis of variance.
10. Nonparametric equivalent of ANOVA.

Prerequisites and co-requisites

Prerequisites include completion of the Statistics for Sociologists course at first-cycle level or a statistics course in another field of study.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	40.0%
	51.0%	60.0%

Recommended reading	Basic literature	Used during classes: 1. Bedyńska, S., Brzezicka, A. (red.). (2007). Statystyczny drogowskaz. Praktyczny poradnik analizy danych w naukach społecznych na przykładach z psychologii, Wydawnictwo SWPS Academica, Warszawa. 2. Józefacka, N.M., Kołek, M.F., Arciszewska-Leszczuk, A. (2023). Metodologia i statystyka. Przewodnik naukowego turysty. Tom 1. PWN. Warszawa. To be studied independently by the student: 1. Malarska, A., (2006), Statystyczna analiza danych wspomagana programem SPSS, SPSS Polska, Kraków. 2. Mayntz, R., Holm, K., Hübner, P. (1985). Wprowadzenie do metod socjologii empirycznej, Państwowe Wydawnictwo Naukowe, Warszawa. 3. Nawojczyk, M. (2002). Przewodnik po statystyce dla socjologów, SPSS Polska, Kraków. 4. Nowak, S. (1970). Metodologia badań socjologicznych. Zagadnienia ogólne, Państwowe Wydawnictwo Naukowe, Warszawa. 5. Pawłowski, T. (1978). Tworzenie pojęć i definiowanie w naukach humanistycznych, Państwowe Wydawnictwo Naukowe, Warszawa. 6. Wieczorkowska, G. Wierzbiński, J. (2007). Statystyka. Analiza badań społecznych, Wydawnictwo Naukowe Scholar, Warszawa.
	Supplementary literature	1. Babbie, E., (2005), Badania społeczne w praktyce, Wydawnictwo Naukowe PWN, Warszawa. 2. Frankfort-Nachmias, C., Nachmias, D., (2001), Metody badawcze w naukach społecznych, Zysk i S-ka, Poznań. 3. Górniak, J., Wachnicki, J., (2008), Pierwsze kroki w analizie danych, SPSS Polska, Kraków. 4. Pawłowski, T., (1977), Pojęcia i metody współczesnej humanistyki, Zakład Narodowy im. Ossolińskich, Warszawa. 5. Biecek, P., (2014), Przewodnik po pakiecie R, Oficyna wydawnicza GIS, Wrocław. 6. Wieczorkowska, G., Kochański, P., Eljaszuk, M., (2004), Statystyka. Wprowadzenie do analizy danych sondażowych i eksperymentalnych, Scholar, Warszawa.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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