University of Gdańsk

Subject card

Subject name and code	Statistics for sociologists, PG_00176642						
Field of study	Sociology						
Date of commencement of studies	October 2027		Academic year of realisation of subject		2028/2029		
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	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		3.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Maciej Dębski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	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		0.0		45.0	75
Subject objectives	The course's main goal is to equip students with the knowledge and skills required to conduct sociological research using basic statistical tools (measures), interpret the obtained results, and formulate final (theoretical) conclusions based on the analysis and interpretation of statistical material (at a basic level).						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[SOCL3_W06] The graduate knows and understands in an advanced way methods of quantitative and qualitative sociological research, including observation, interview, document analysis, and knows how to develop and report the results of researchThe graduate knows and understands in an advanced way basic methods of quantitative and qualitative sociological research, including observation, interview, document analysis, and knows how to develop and report the results of research	Conducts statistical inference embedded in the conceptual framework of the scientific inquiry being conducted.	[SW4] test/exam - oral or written
[SOCL3_U06] The graduate is able to use the acquired sociological knowledge to resolve dilemmas arising in professional work	The Student is able to make decisions based on the results of statistical analyses.	[SU4] test/exam - oral or written
[SOCL3_K01] The graduate is ready to appropriately determine priorities in the implementation of a specific task	The student is ready to appropriately prioritize when defining statistical tasks.	[SK4] test/exam - oral or written
[SOCL3_K02] The graduate is ready to recognise and accurately resolve dilemmas related to his/ her profession	The student is ready to use criteria to select statistical tests used in research.	[SK4] test/exam - oral or written
[SOCL3_K04] The graduate is ready to supplement and refine the acquired knowledge and skills	The student is ready to use statistical analysis tools in sociological research and increases the scope of applied research strategies.	[SK4] test/exam - oral or written

Subject contents

1. Tabular forms of presenting statistical material (unordered data, ordered data, point series, frequency distributions with class intervals).2. Graphical forms of presenting statistical material (bar chart, pie chart, pictorial chart, time series diagram, histogram, frequency polygon, empirical cumulative distribution function). 3. Measures of central tendency: means, mode.4. Measures of central tendency: percentiles and quartiles, median.5. Measures of dispersion: range, interquartile range, interquartile deviation, average deviation.6. Measures of dispersion: variance, standard deviation, coefficients of variation.7. The issue of skewness in a series. Measures of concentration.8. Elements of combinatorics and probability theory.9. Probability distributions. Introduction to the concept of the normal distribution.10. Standardization of a variable in a normal distribution.11. Methods of selecting/sampling units for a sample. The issue of minimum sample size. 12. Introduction to the estimation procedure. Point estimation and interval estimation.13. Tests of statistical significance: tests for two independent samples.14. Tests of statistical significance: tests for two dependent samples.

Prerequisites and co-requisites

Advance to the fourth semester of study.

A basic understanding of quantitative research methodology.

Mathematical knowledge at the undergraduate level.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
	51.0%	100.0%

Recommended reading

Basic literature	a/ Bąk, I., Markowicz, I., Mojsiewicz, M., Wawrzyniak, K., (2002), Statystyka w zadaniach. Część I statystyka opisowa, Wy-dawnictwa Naukowo-Techniczne, Warszawa. b/ Bąk, I., Markowicz, I., Mojsiewicz, M., Wawrzyniak, K., (2006), Statystyka w zadaniach. Część II statystyka matematyczna, Wydawnictwa Naukowo-Techniczne, Warszawa. c/ Sobczyk, M., (2002), Statystyka, PWN, Warszawa. d/ Starzyńska, W., (2006), Statystyka praktyczna, Wydawnictwo Naukowe PWN, Warszawa

	Supplementary literature	Balicki, A., Makać, W., (2007), Metody wnioskowania statystycznego, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk. Blalock, H. (1975), Statystyka dla socjologów, PWN, Warszawa. Makać, W., Urbanek-Krzysztofiak, D., (2009), Metody opisu statystycznego, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk. Bedyńska, S., Brzezicka, A., (2007), Statystyczny drogowskaz. Praktyczny poradnik analizy danych w naukach społecznych, Wydawnictwo SWPS Academica, Warszawa. Nawojczyk, M., (2002), Przewodnik po statystyce dla socjologów, SPSS Polska, Kraków. Biecek, P., (2014), Przewodnik po pakiecie R, Oficyna wydawnicza GIS, Wrocław. 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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