

**Subject card**

<b>Subject name and code</b>	Sample Surveys' Techniques, PG_00124927						
<b>Field of study</b>	Finance and Accounting						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2025/2026		
<b>Education level</b>	postgraduate studies	<b>Subject group</b>			Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	2	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	3	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>					
<b>Conducting unit</b>	Katedra Statystyki -> Faculty of Management						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr Arkadiusz Kozłowski				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	15.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		10.0		10.0	50
<b>Subject objectives</b>	<ol style="list-style-type: none"> <li>1. Acquiring knowledge about statistical research, both from the theoretical side (classical statistical inference paradigm) and from the practical side, related to the organization and conduct of sample research.</li> <li>2. Acquiring the ability to critically evaluate survey results and understand the strengths and weaknesses of the study.</li> <li>3. Learning about inference methods based on non-simple samples.</li> </ol>						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FiRMU2_W05] The student has an extended knowledge of advanced methods and tools, including data acquisition and analysis techniques, specific to the social sciences to describe economic structures and institutions and the processes within and between them.	The student knows the methods of selecting a sample for non-exhaustive research, knows what are the possible sources of errors in survey research, knows the methods of drawing conclusions based on non-simple samples, including weighing and calibration techniques. The student knows the methods of examining the interdependence of various types of variables.	[SW4] test/exam - oral or written
	[FiRMU2_K06] Creativity: - the student has the ability to think creatively, can go beyond the usual patterns, - can think and act in an entrepreneurial manner, - can flexibly adapt to the changing requirements of the environment.	The student is able to explain the complexity of survey research, its advantages and limitations.	[SK2] presentation/project/paper/report
	[FiRMU2_U02] The student can use advanced theoretical knowledge to describe the causes and course of economic processes and phenomena. The student can formulate his own critical opinions.	The student knows the methods of selecting a sample for non-exhaustive research, knows what are the possible sources of errors in survey research, knows the methods of drawing conclusions based on non-simple samples, including weighing and calibration techniques. The student knows the methods of examining the interdependence of various types of variables.	[SU2] presentation/project/paper/report
	[FiRMU2_K02] Cooperation: - the student can harmoniously interact and work in a group, assuming various roles in the group, including leadership and supervision of the group, - can agree with the group on goals and division of tasks, - is open-minded, respecting the differences of other team members.	The student is able to design and conduct a survey, including determining the sample selection method, sample size, data collection technique, designing a questionnaire, coding questions, and conducting basic quantitative analysis of the obtained data.	[SK2] presentation/project/paper/report
	[FiRMU2_K04] Integrity: - the student adheres to the principles of business ethics and takes action to comply with these principles, - respects the law, - is objective, can perceive conflicts of interest, - correctly identifies and resolves dilemmas related to the practice of the profession.	The student knows how to apply the principles of ethical conduct during the implementation of individual stages of survey research.	[SK2] presentation/project/paper/report
	[FiRMU2_U05] The student correctly uses normative systems and selected norms and rules (legal, professional, moral) to solve in-depth problems in finance and accounting. The student has the ability to efficiently use the normative system appropriate to his specialty.	The student is able to explain the complexity of survey research, its advantages and limitations.	[SU4] test/exam - oral or written
	[FiRMU2_W04] The student has expanded knowledge of views on economic and social structures and institutions, as well as types of social ties and their historical evolution.	The student is able to design and conduct a survey, including determining the sample selection method, sample size, data collection technique, designing a questionnaire, coding questions, and conducting basic quantitative analysis of the obtained data.	[SW4] test/exam - oral or written

Subject contents	<p>I. Statistical description and statistical inference (revision)</p> <p>The essence of statistical research  Population and unit of study  Objectives of statistical description  Main properties of the feature distribution (central tendency, dispersion, asymmetry, concentration)  The essence and importance of statistical inference  The role of probability theory in statistical inference</p> <p>II. Sample selection for sample surveys</p> <p>The essence and conditions of random and non-random sample selection techniques  Probability sampling  Non-probability sampling</p> <p>III. Characteristics of survey measurement</p> <p>Questionnaire design  Types of questions and the technique of formulating them  Levels and scales of measurement  Coding of closed questions  Data collection techniques (face-to-face interview, telephone survey, Internet research, etc.)  Quantitative vs. qualitative research  Limitations of survey measurement</p> <p>IV. Accuracy of survey research</p> <p>The concept and classification of errors in survey research  Sampling error  Coverage error  No-response error  Measurement error  Data processing and processing errors  Correct presentation of test results</p> <p>V. Statistical inference based on non-simple samples</p> <p>Weighting due to the sampling scheme  Weighting for missing responses  Use of additional information to construct scales calibration (including post-stratification)  Point and interval estimation based on composite samples (estimation of averages, global values and structure indicators)  Determining the sample size</p> <p>VI. Verification of statistical hypotheses</p> <p>The essence of hypothesis verification.  Errors of the first and second kind.  Significance tests.  Critical severity level.  Test power.</p> <p>VII. Statistical inference in interdependence analysis</p> <p>Methods of inferring interdependence.  Tests for two means.  Homogeneity tests for independent and combined samples.  Analysis of variance (ANOVA).</p>									
Prerequisites and co-requisites	Knowledge of basic methods of descriptive statistics and mathematical notation.									
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="459 1529 794 1563">Subject passing criteria</th> <th data-bbox="802 1529 1137 1563">Passing threshold</th> <th data-bbox="1145 1529 1469 1563">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="459 1563 794 1597">written exam</td> <td data-bbox="802 1563 1137 1597">51.0%</td> <td data-bbox="1145 1563 1469 1597">50.0%</td> </tr> <tr> <td data-bbox="459 1597 794 1630">project / test</td> <td data-bbox="802 1597 1137 1630">51.0%</td> <td data-bbox="1145 1597 1469 1630">50.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	written exam	51.0%	50.0%	project / test	51.0%	50.0%
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Recommended reading	Basic literature	<p>Aczel A. D., Statystyka w zarządzaniu, PWN, Warszawa 2000</p> <p>Szreder M. i Kozłowski A., Wnioskowanie na podstawie prób losowych i nielosowych, Wydawnictwo UG, Gdańsk 2024</p> <p>Makać W., Urbanek-Krzysztofiak D., Metody opisu statystycznego, UG, Gdańsk 2006</p> <p>Balicki A., Makać W., Metody wnioskowania statystycznego, UG, Gdańsk 2007</p> <p>Kaczmarczyk S., Badania marketingowe, metody i techniki, PWE, Warszawa 2002</p> <p>Kozłowski A., i Szreder M., Informacje spoza próby w badaniach statystycznych, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020</p>
	Supplementary literature	<p>Sobczyk M., Statystyka, PWN, Warszawa 2014</p> <p>Szreder M., Metody i techniki sondażowych badań opinii, PWE, Warszawa 2010</p>
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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