

Subject card

Subject name and code	Sampling Methods, PG_00177502						
Field of study	Informatics and Econometrics						
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 Optional subject group 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	1		Language of instruction		Polish		
Semester of study	2		ECTS credits		4.0		
Learning profile	academic		Assessment form		exam		
Conducting unit	Department of Statistics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Arkadiusz Kozłowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	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	45		3.0		52.0	100
Subject objectives	The aim of the course is to familiarize students with the theory and practice of sample research, basic sample designs and methods of estimating population parameters based on random samples.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[liEMU2_U01] The student can creatively and profoundly analyze complex social and economic processes using structured knowledge, econometrics, informatics, or statistics tools.		The student determines the optimal method of sample selection for a sample survey, draws a sample according to a specific scheme, estimates unknown population parameters, evaluates the accuracy of estimates, incorporates information from outside the sample into the estimation process by weighing units and calibrating weights.		[SU2] presentation/project/paper/report		
	[liEMU2_W06] The student possesses a structured understanding of the processes, methods, and tools necessary for the design, creation, development, and provision of suitable conditions for informatics, econometrics or statistics tools.		The student matches the methods of sample selection for a sample survey. The student characterizes the methods of estimating finite population parameters and assessing sampling errors.		[SW4] test/exam - oral or written		

Subject contents	The essence of survey sampling.		
	Sampling design and estimation methods.		
	Simple random sampling. Simple and complex estimation.		
	Stratified sampling. Balanced sampling.		
	Cluster and multistage sampling.		
	Nonresponses and calibration approach.		
	Simplified/approximate variance estimation.		
Prerequisites and co-requisites	Knowledge of the basics of probability and mathematical statistics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	51.0%	50.0%
	Oral exam	51.0%	50.0%
Recommended reading	Basic literature	Kozłowski A., Szreder M., Informacje spoza próby w badaniach statystycznych, Wydawnictwo UG, Gdańsk 2020.	
		Szreder, M., Kozłowski, A., Wnioskowanie na podstawie prób losowych i nielosowych. Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2024.	
		Bracha C., Metoda reprezentacyjna w badaniu opinii publicznej i marketingu, Efekt, Warszawa 1998.	
		Lohr S.L., <i>Sampling. Design and analysis</i> , CRC Press, London, New York 2022.	
	Supplementary literature	Steczkowski J., Metoda reprezentacyjna w badaniach zjawisk ekonomiczno-społecznych, Wydawnictwo Naukowe PWN, Warszawa-Kraków 1995.	
	Zasępa R., Metoda reprezentacyjna, PWE, Warszawa 1972.		
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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