University of Gdańsk

Subject card

Subject name and code	Quantitative and Qualitative Research Methods, PG_00178703		
Field of study	Informatics and Econometrics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Master'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	part-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	6.0
Learning profile	academic	Assessment form	exam
Conducting unit	Department of Statistics -> Faculty of Management -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Tomasz Jurkiewicz	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	16.0	16.0	0.0	0.0	0.0	32

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	32	2.0	116.0	150

Subject objectives

Gaining knowledge about the essence and purpose of scientific research, the essence of scientific theories and the scientific method. Familiarization with methods of reasoning, inference and generalization.

Getting to know the specificity of quantitative and qualitative methods, acquiring the ability to select a method for the research problem.

Acquiring the ability to search through various economic and financial databases, download data and assess their completeness and reliability. Acquiring the ability to formulate research hypotheses, goals and research questions.

Gaining knowledge about non-exhaustive statistical research. Acquisition of practical skills related to the organization and conduct of sample surveys. Acquiring the ability to critically evaluate the results of surveys, understanding the strengths and weaknesses of the survey. Acquiring the ability to quantitatively summarize research results.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[IiEMU2_U09] The student can independently plan and implement the process of learning and improving professional skills in econometrics, informatics or statistics throughout life and guide others in this regard.	The student independently searches for information about the latest research methods.	[SU2] presentation/project/paper/ report
[IiEMU2_W05] The student possesses advanced knowledge and understanding of informatics, statistics, and econometrics techniques and tools used to acquire, process, or visualise data to aid in decision-making and verify research hypotheses.	The student selects sampling methods for non-exhaustive research; identifies possible sources of error in survey research. The student is able to characterize qualitative research methods: the grounded theory method, the case study method, action research, and ethnographic methods.	[SW4] test/exam - oral or written
[IiEMU2_W02] The student comprehends advanced theoretical and practical concepts in econometrics, informatics, or statistics, which are essential for a deeper understanding of economic and social phenomena.	The student identifies processes in the organization that require the acquisition of knowledge from quantitative and qualitative research.	[SW4] test/exam - oral or written
[IiEMU2_U01] The student can creatively and profoundly analyze complex social and economic processes using structured knowledge, econometrics, informatics, or statistics tools.	The student explains the complexity of the sample survey, its advantages and limitations. The student interprets the results of qualitative and quantitative research and assesses their usefulness in the process of making business decisions.	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
[IiEMU2_W08] The student possesses a comprehensive understanding of the methods, conditions, directions, and dilemmas involved in applying advanced econometrics, informatics or statistics tools in response to dynamic environmental changes.	The student recognizes the needs of the company in terms of obtaining data from quantitative and qualitative research.	[SW4] test/exam - oral or written
[IiEMU2_U04] Students can choose, develop, and analyze traditional or innovative models of complex economic and social phenomena to make informed decisions.	The student selects a research method adapted to the objectives of the study and the possibility of its implementation. The student selects a qualitative research method adequate to the research problem being solved.	[SU2] presentation/project/paper/ report
[IiEMU2_U03] The student is able to obtain and verify data from properly selected sources and to collect, process, and visualize it using modern econometrics, informatics or statistics tools.	The student designs and conducts a survey research, including determining the method of sample selection, data collection technique, designing a questionnaire, coding questions, and conducting a basic quantitative analysis of the obtained data. The student obtains data for qualitative research using many methods, including analysis of source documents, structured and semi-structured interviews, observation and participatory observation. The student obtains data for quantitative research using various financial and economic databases, assesses their reliability and completeness.	[SU2] presentation/project/paper/ report

Subject contents	1. The essence of scientific research, theory and scientific method. Research paradigms 2. Methods of reasoning: induction and deduction. Possibilities and limitations of generalization in inductive research 3. The essence of quantitative and qualitative research (types of business research, stages of the research process, importance of secondary and primary data, statistical description and statistical inference) 4. Sample selection in non-exhaustive studies (the essence and determinants of random and non-random sampling techniques, probabilistic and non-probabilistic sampling methods) 5. Data collection techniques (types, pros and cons) 6. Characteristics of survey measurement (questionnaire design, measurement levels and scales, question coding) 7. Accuracy of sample surveys (concept and classifications of errors in sample surveys, random error, coverage error, non-response errors, measurement errors) 8. Economic and financial databases 9. Research hypotheses vs. statistical hypotheses 10. Quantitative data analysis 11. Qualitative methods: case study, grounded theory, ethnographic research, project method, action research
Prerequisites and co-requisites	
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
Written exam	51.0%	50.0%
Project	51.0%	50.0%

Recommended reading	Basic literature	Babbie, E. R. *Podstawy badań społecznych*. Wydawnictwo Naukowe PWN, Warszawa 2009. Babbie E. *Badania społeczne w praktyce*. Wydawnictwo Naukowe PWN, Warszawa, 2003. Kaczmarczyk S., *Badania marketingowe, metody i techniki*, PWE, Warszawa 2002. Kozłowski A., Szreder M.*, Informacje spoza próby w badaniach statystycznych*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 2020. Myers, M. D. (1997). *Qualitative research in information systems*. MIS Quarterly, 21(2), 241242. https://doi.org/10.2307/249422. Saunders M.N.K. Lewis P., Thornhill A. (2015). *Research Methods for Business Students* (7th Edition), Pearson.

	Supplementary literature	Szreder M. Kozłowski A., *Wnioskowanie na podstawie prób losowych i nielosowych*, Wydawnictwo UG, Gdańsk 2024. Lim, W. M. (2024). What Is Qualitative Research? An Overview and Guidelines. Australasian Marketing Journal. Yin, R. (2009). Case Study Research. Design and Methods (Fourth Edi). Sage.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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