University of Gdańsk

Subject card

Subject name and code	Diploma Seminar 2, PG_00178694						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2028/2029		
Education level	Bachelor'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	3		Language of instruction		Polish		
Semester of study	6		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Econometrics -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Marta Chylińska				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	35.0	35
	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	35		4.0		86.0	125
Subject objectives	Completion of Chapters II and III, introduction and summary as well as preparation for the defense of the diploma thesis in accordance with ethical requirements and the principles of writing papers according to the standard specified by the Dean of the Faculty						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEL3_U04] Can build and interpret models of economic and social phenomena and processes for decision-making processes	The student is able to correctly interpret models of economic and social phenomena and processes.	[SU3] text preparation/written work
	[IiEL3_U07] Can prepare written papers, presentations, and oral speeches on problems in econometrics, informatics, or statistics	The student is able to describe and present the results of his/her research and interpret them. The student creates appropriate graphs and data sets in the form of tables.	[SU3] text preparation/written work
	[IiEL3_U10] Can convey information clearly and effectively, presenting their opinions using econometrics, informatics, and statistics terminology across various media	The student is able to present the material he has developed concerning issues related to his bachelor's thesis. Student is able to formulate and publicly present and discuss theses concerning a chosen scientific topic.	[SU3] text preparation/written work
	[IiEL3_U03] Can obtain data from appropriately selected sources, use these data to solve economic and social problems, and process and interpret them using econometrics, informatics or statistics tools	The student is able to obtain data relevant to the stated research goal and specific research problem. Processes them using appropriate measures and statistical methods. Interprets the obtained results.	[SU3] text preparation/written work
	[IiEL3_K01] Is prepared to acquire the knowledge necessary to tackle cognitive and practical problems, particularly in econometrics, informatics and statistics. Additionally, the students are ready to assess their current knowledge and the information they receive critically and consult with experts if they have difficulties solving the problem independently	The student is able to search for, analyse, and evaluate the information obtained. The student uses various sources necessary to prepare a scientific paper. The student verifies their knowledge during the seminar.	[SK3] text preparation/written work
	[IiEL3_K02] Is ready to perform professional roles responsibly, observe professional ethics and require this of others, and care for the achievements and traditions of the professions related to econometrics, informatics or statistics	The student is able to identify and apply the principles of responsible action in the context of analytical work, demonstrates awareness of the ethical aspects of data use, and respects the standards and good practices of the statistical, IT and econometric environment.	[SK3] text preparation/written work
	[IiEL3_U02] Can select or construct econometrics, informatics or statistics tools and apply them to describe and solve economic and social problems	The student is able to select statistical measures/methods appropriate to the research problem and the data obtained. Analyzes, describes and solves an economic or social problem resulting from the purpose of the work and the research problem.	[SU3] text preparation/written work
	[IiEL3_W05] Knows and understands the methods, techniques and informatics or statistics tools used to acquire, collect, process and present data in decision-making processes	The student is able to use the obtained data and appropriate measures and statistical or econometric methods to solve a defined research problem.	[SW3] text preparation/written work

Subject contents	**Seminar Scope** This bachelor's seminar focuses on applying and comparing classical methods (econometrics and statistics) with Big Data approaches. The thematic scope of the seminar includes: Measures of uncertainty and instability in financial markets Financial instrument valuation The impact of geopolitical events on market performance Assessing the effects of crises on financial instrument valuation Other topics proposed by students Examples of Thesis Topics The impact of the war in Ukraine on agricultural commodity prices Valuation of metal futures contracts during periods of financial market instability Relationships between futures contract prices The impact of war on stock market indices across international markets Determinants of demand for musical instruments using a panel data approach Econometric analysis of the determinants of football players' market value in leading European leagues Economic consequences of armed conflicts: the case of the Russian-Ukrainian war The relationship between economic growth and public health in Balkan countries **PhD Marta Chylińska** The seminar focuses on modeling and forecasting processes occurring in financial markets and covers topics such as: Forecasting returns on financial instruments using time series of various frequencies and evaluating forecast accuracy. Asset pricing using factor models. The theses place particular emphasis on data analysis and the application of statistical and econometric methods. Examples of Thesis Topics Stock price volatility and trading volume: evidence from companies listed in the WIG Index.

Sectoral risk on the Warsaw Stock Exchange.

PhD Agnieszka Martynowska

Modeling demographic phenomena, such as mortality and migration.

Development of various branches of economics in Poland and/or selected countries.

Applications of econometric models to study, for example, housing prices or the number of loans granted.

Comparison of countries or regions in terms of selected economic, social, or demographic indicators.

Any topic proposed by the student and agreed upon with the supervisor.

PhD Anna Gierusz-Matkowska

Social and economic statistics (e.g., inequality, poverty, inflation, national accounts).

Statistical methods in the analysis of social and economic phenomena (e.g., unemployment, regional development, standard of living).

Survey research.

Any other topic upon agreement with the supervisor.

Selected Bachelor's Thesis Titles

Analysis of the profitability of alternative investments

Living standards of farmers between 2006 and 2022

Comparative analysis of quality of life in two-parent and single-parent families in 2011 and 2021

Minimum wage and the economic situation of low-income households between 2002 and 2023

Statistical analysis of unemployment in the Pomeranian Voivodeship between 2010 and 2022

Analysis of divorce trends in Poland between 2005 and 2019

Economic development in the West Pomeranian Voivodeship compared with other regions of Poland

PhD Olga Komorowska

Survey sampling methodology

Sampling design techniques

Data collection methods

Nonresponse and data imputation

	Questionnaire design and measurement errors Data processing and preparation for analysis Statistical hypothesis testing Analysis of variance (ANOVA) Generalized regression models Data classification methods Clustering methods Computer simulations Data visualization The R programming environment **PhD Arkadiusz Kozłowski** Analysis of socio-economic phenomena using statistical, econometric, or actuarial methods (e.g., labor markets, financial markets, insurance markets, or pension systems). Statistical analysis and development of a selected economic market sector (e.g., the insurance market). Analysis of demographic phenomena (e.g., migration, mortality, population ageing, depopulation) in Poland or other selected countries. Comparative statistical analysis of selected variables (e.g., enterprises or administrative units such as counties, provinces, macro-regions, countries, or continents) across time and space. Topic selection based on the student's interests and field of study, subject to agreement with the supervisor. **PhD Agnieszka Pobłocka**
Prerequisites and co-requisites	Knowledge of mathematics, statistics and econometrics

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Bachelor's thesis accepted by the supervisor	51.0%	100.0%

Recommended reading

Basic literature	Literature used by the student for writing the thesis, verified by the seminar supervisor. W. Czakon (red), Podstawy metodologii badań w naukach o zarządzaniu. Wyd. Nieoczywiste, Warszawa, 2016
Supplementary literature	M. Ćwiklicki, Metodyka przeglądu zakresu literatury (scoping review), MPRA, 2020; do pobrania: https://mpra.ub.uni-muenchen.de/104370/1/MPRA_paper_104370.pdf
eResources addresses	

Example issues/ example questions/ tasks being completed	

Work placement	Not applicable

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