



## Subject card

Subject name and code	Econometrics, PG_00068588						
Field of study	Economic Analytics						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	first-cycle 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	2		Language of instruction		Polish		
Semester of study	4		ECTS credits		4.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Department Of Statistics And Econometrics -> Faculty Of Management And Economics -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	16.0	0.0	16.0	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		6.0		62.0	100
Subject objectives	Creates econometric models to analyze economic processes.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U05] leverages the knowledge acquired in the field of economic analytics to solve challenging problems, achieving results that are economically and socially valuable.		is able to use the learned methods of estimation and verification of econometric models		[SU4] Assessment of ability to use methods and tools		
	[K6_W05] possesses advanced knowledge in integrating data from various sources and in methods that enable a comprehensive analysis of economic problems.		has the knowledge to analyze cause-and-effect relationships in economic processes		[SW3] Assessment of knowledge contained in written work and projects		
Subject contents	An econometric model and its components. Simple and multiple regression. Steps in building an econometric model. Specification of econometric model. Parameter estimation of linear econometric model. Method of least squares (LSM) estimation of linear econometric model. Stochastic assumptions in an econometric model. Economic verification of an econometric model. Statistical verification, assessment of the degree of model fit and testing of stochastic properties of the model. Estimation of a linear regression model using the method of moments and maximum likelihood. Multiplicative models - properties and methods of estimating parameters. Autocorrelation property of the random component - causes, effects, measurement, testing and methods of removing causes. Heterocedasticity of a random component. Generalized least squares method (GLS). Parameter estimation under autocorrelation and heteroskedasticity of the random component. Cause and effect compatible model. Econometric forecasting based on an econometric model.						
Prerequisites and co-requisites	matematics, microeconomics, macroeconomics, statistics, mathematical statistics						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	colloquium (lab)	60.0%	50.0%
	exam	60.0%	50.0%
Recommended reading	Basic literature	Kufel ,T. (2022). Ekonometria. Rozwiązania problemów z wykorzystaniem programu Gretl. Warszawa; Wydawnictwo Naukowe PWN Maddala, G.S. (2022). Ekonometria, Warszawa: Wydawnictwo Naukowe PWN Borkowski, B., Dudek, H., Szczęsny, W. (2020). Ekonometria. Wybrane zagadnienia, Warszawa: Wydawnictwo Naukowe PWN	
	Supplementary literature	Nowak, E. (2022) Zarys metod ekonometrii. Zbiór zadań, Warszawa: Wydawnictwo Naukowe PWN	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Consider the following inflation model: $\text{inf}_t = 8,0 + 0,6\text{inf}_{t-1} - 0,7 r_t + \epsilon_t$ , where: $\text{inf}_t$ annual inflation in period $t$ (in%), $r_t$ real interest rate at the beginning of period $t$ (in%). Identify the short-term effect of the impact of the interest rate on the level of inflation and the time-lagged inflation level.		
Work placement	Not applicable		

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