

。 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ECONOMETRICS, PG_00058562								
Field of study	Economic Analytics								
Date of commencement of studies	October 2022		Academic year of realisation of subject			2023/2024			
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			5.0			
Learning profile	general academic profile		Assessment form			exam			
Conducting unit	Department of Statistics and Econometrics -> Faculty of Management and Economics								
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Sabina Szymczak							
	Teachers	dr inż. Sabina Szymczak							
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	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 ir classes includ plan	n didactic ed in study	Participation in consultation hours		Self-study		SUM	
	Number of study hours	32	10.0		83.0		125		
Subject objectives	Creates econometric models to analyze economic processes.								
Learning outcomes	Course out	come	Subject outcome Method of verification					fication	
	[K6_U05] Designs innovative solutions to challenging problems by applying knowledge from the field of economic analytics, achieving economically and socially valuable outcomes.		recognizes methods used for estimation and verification of econometric models, choosing the method to fit the defined problem			[SU4] Assessment of ability to use methods and tools			
	[K6_W05] Possesses advanced knowledge of data integration from multiple sources and advanced analytical methods, enabling the analysis of complex economic problems.		analyzes cause and effect relationships occurring 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. 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. Time series analysis - models of trend with seasonality. Econometric forecasting based on an econometric model.								
Prerequisites and co-requisites	statistics, mathematic	ai statistics							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade		
	exam	60.0%	50.0%		
	lab test	60.0%	50.0%		
Recommended reading	Basic literature	Gruszczynski, M. Kuszewski T., Podgórska M.,(red. nauk.), Ekonometria i badania operacyjne. Wydawnictwo Naukowe PWN, Warszawa 2009 Kufel ,T. (2022). Ekonometria. Rozwiązania problemów z wykorzystaniem programu Gretl. Warszawa; Wydawnictwo Naukowe PWN Borkowski, B., Dudek, H., Szczęsny, W. (2020). Ekonometria. Wybrane zagadnienia, Warszawa: Wydawnictwo Naukowe PWN			
	Supplementary literature	Maddala, G.S. (2022). Ekonometria, Warszawa: Wydawnictwo Naukowe PWN			
	eResources addresses	Podstawowe http://han.bg.pg.edu.pl/han/ibuk-libra/https/libra.ibuk.pl/reader/ ekonometria-rozwiazywanie-problemow-z-wykorzystaniem-programu- gretl-tadeusz-kufel-9303 - Kufel T ., Econometrics. Problem solutions with the use of the Gretl program, Wydawnictwo Naukowe PWN, Warsaw 2022 Adresy na platformie eNauczanie: Ekonometria lato24 - Moodle ID: 37510 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=37510			
Example issues/ example questions/ tasks being completed	Using the data from the datafile, estimate and interpret the Cobb-Douglas production function model to describe the output Y with the use of production factors K and L.				
Work placement	Not applicable				

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