



Subject card

Subject name and code	Econometrics, PG_00044524						
Field of study	Economic Analytics						
Date of commencement of studies	October 2021	Academic year of realisation of subject			2022/2023		
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 Economic Sciences -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Krzysztof Świetlik					
	Teachers	dr inż. Krzysztof Świetlik					
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		9.0		84.0	125
Subject objectives	Acquaintance the students with construction, estimation, verification and interpretation of econometric models						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U07] Can use quantitative methods to analyse and solve economic problems using information technologies.	Student can construct the model and estimate it using econometric software.			[SU4] Assessment of ability to use methods and tools		
	[K6_W11] Knows quantitative methods to describe and analyse socio-economic processes; understands their conditions and consequences.	Student knows how to construct, estimate and interpret econometric models.			[SW1] Assessment of factual knowledge [SW3] Assessment of knowledge contained in written work and projects		
	[K6_W07] Has the knowledge of sub-disciplines in economics and finance and understands their importance for economic development.	Student knows relationships between economic processes			[SW1] Assessment of factual knowledge		
	[K6_U01] Can correctly identify and describe, using quantitative methods, and interpret economic phenomena and processes and their conditions.	Student can identify the relationships between phenomena in economy and can describe them using econometric model.			[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools		
Subject contents	Econometric model - main components. Stochastic assumptions for econometric model. The ordinary least squares (OLS) method estimation of the econometric model cases of simple and multiple regressions. Stochastic properties of the OLS estimator. Verification of estimated model goodness of fit and testing the significance of the coefficients. Autocorrelation consequences for OLS, causes, testing and estimation in the presence of autocorrelation. Heteroscedasticity consequences for OLS, causes, testing and estimation under heteroscedasticity. Time trend model with seasonality. Cause-effect dynamic models assumptions, interpretation, estimation and verification. Multiplicative models properties.						

Prerequisites and co-requisites	mathematics, macroeconomics, microeconomics, statistics		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	60.0%	50.0%
	laboratory test	60.0%	50.0%
Recommended reading	Basic literature	Maddala G.S.: Introduction to Econometrics John Wiley&Sons,LTD, New York, 2002	
	Supplementary literature	Welfe A.: Ekonometria, PWE, Warszawa 1995,  Welfe W., Welfe A.: Ekonometria stosowana, PWE, Warszawa 1996,  Borkowski B., Dudek H., Szczęsny W., EKONOMETRIA, WYBRANE ZGADNIENIA, Wydawnictwo Naukowe PWN, Warszawa 2003,  <a href="http://www.zie.pg.gda.pl/web/katedra-nauk-ekonomicznych/17">http://www.zie.pg.gda.pl/web/katedra-nauk-ekonomicznych/17</a>	
	eResources addresses	Adresy na platformie eNauczanie: Ekonometria - niestacjonarne - Moodle ID: 29939 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=29939">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=29939</a>	
Example issues/ example questions/ tasks being completed	<p><b>Consider the model of inflation:</b> <math>inf_t = 8,0 + 0,6inf_{t-1} - 0,7 r_t</math></p> <p>where : <math>inf_t</math> anual inflation in period <math>t</math> ( w %), <math>r_t</math> real interest rate in beginning of period <math>t</math> ( w %).</p> <p><b>3.1</b> Define short run effect of influence interest rate on inflation:.....</p> <p><b>3.2</b> Define long run effect of influence interest rate on inflation:.....</p>		
Work placement	Not applicable		

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