

Subject card

Subject name and code	Econometrics, PG_00132322						
Field of study	International Business						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	postgraduate studies	Subject group			Obligatory subject group in the field of study		
Mode of study	full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			English		
Semester of study	2	ECTS credits			2.0		
Learning profile	academic	Assessment form					
Conducting unit	Katedra Ekonomii Międzynarodowej i Rozwoju Gospodarczego -> Faculty of Economics -> Rektor						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Dorota Ciołek				
	Teachers		dr hab. Dorota Ciołek				
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	15.0	0.0	0.0	0.0	15
	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	15		15.0		20.0	50
Subject objectives	Presentation of the econometric model as a tool for hypothesis verification and forecasting in economics and management sciences. Acquiring knowledge and practical skills in building, estimating, interpreting and evaluating econometric models..						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[[IBMU2_U01] can creatively interpret, explain and analyse complex economic phenomena and the relations occurring between them, using the acquired knowledge in international business and international economic and financial relations	can propose an econometric model suitable for verifying specific hypotheses or research goals	[SU5] implementation of a problem task
	[[IBMU2_W02] knows and understands methods and tools for describing economic phenomena, including data acquisition techniques, which make it possible to describe and analyse business entities functioning on the international market as well as processes and phenomena occurring in them and between them	knows the basic types of single-equation econometric models, methods of their estimation, tools for their verification and ways of interpreting them in relation to specific relationships in economics and other social sciences	[SW5] implementation of a problem task
	[[IBMU2_K01] Is ready to recognise the importance of knowledge of international business in the process of identifying and solving business problems and the need to consult experts in cases of complex issues	can interpret the results of econometric analysis carried out by other people and use them to make decisions	[SK1] oral statement/conversation/discussion
	[[IBMU2_U02] can interpret statistical data and economic indicators, and select and use quantitative and qualitative methods and tools developed by economic sciences, including advanced information and communication techniques	is able to build and estimate an econometric model and verify and interpret it	[SU5] implementation of a problem task
	[[IBMU2_K03] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; assesses risks and threats and finds ways of counteracting their effects	can discuss the possibility of using econometric modeling to analyze economic phenomena	[SK1] oral statement/conversation/discussion
	[[IBMU2_K02] is ready to critically assess the level of acquired knowledge, skills and professional competence in the area of international business	is able to interpret the results of estimating an econometric model and use it appropriately in the process of making economic decisions	[SK5] implementation of a problem task
Subject contents	<p>1) The nature of economic data:- overview of the kinds of data sets that are used in business, finance, economics, and other social sciences - discussion of the difficulties associated with the inference of causality in the social sciences- econometrics as a tool of testing economic theories and evaluating policy effects when we must rely on nonexperimental data- econometric model used for predicting the dependent variable</p> <p>2) Simple and Multiple Linear Regression Model- the study the relationship between two variables - multiple regression analysis as the most widely used vehicle for empirical analysis in economics and other social sciences- interpretation of the regression model as a tool of ceteris paribus analysis</p> <p>3) Estimation of the parameters using the method of Ordinary Least Squares (OLS) - idea of OLS - interpreting the OLS regression equation- OLS fitted values and residuals- goodness-of-fit to the empirical values- statistical properties of OLS for the parameters in an underlying population model- consistency of OLS- the variance of the OLS estimators - efficiency- testing of OLS assumptions- robust standard errors</p> <p>4) Model estimation - special issues - including irrelevant variables in a regression model- omitted variable bias- multicollinearity - highly correlated explanatory variables- outlying observations- using logarithmic functional forms- models with quadratics- models with interaction terms</p> <p>5) Regression of Qualitative Information: Dummy Variables- describing qualitative information - binary variable- dummy explanatory variable- interpreting Coefficients on Dummy Explanatory- dummy variables for multiple categories</p> <p>6) Time Series Data - Basic Regression - the nature of time series data- trends and seasonality- Unit Root tests and integrated values</p>		

Prerequisites and co-requisites	<p>Student should be familiar with the principles of consumer and producer behavior, basic models of market competition. General equilibrium and growth, international trade, capital and money markets.</p> <p>The knowledge of elementary linear algebra, differential and integral calculus, statistical theory.</p>		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Activity in classes	51.0%	10.0%
	Own project - essay	51.0%	90.0%
Recommended reading	Basic literature	<p>Koop G., Introduction to Econometrics., John Wiley and Sons, (2008)</p> <p>Wooldridge J.M., Introductory Econometric. A modern approach. , South-Western Cengage Learning (4e - 2009 or 5e - 2013)</p> <p>Ramanathan R., Introductory Econometrics with Applications. South-Western, Mason (2002)</p>	
	Supplementary literature	<p>Verbeek M., A guide to Modern Econometrics., John Wiley & Sons, Ltd (2e-2004)</p> <p>Greene W.H., Econometric analysis., Prentice Hall, Upper Saddle River, (2008)</p>	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

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