

Subject card

Subject name and code	Econometrics, PG_00155985						
Field of study	Management						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2025/2026		
Education level	postgraduate 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	academic		Assessment form				
Conducting unit	Katedra Ekonometrii -> Faculty of Management						
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	10.0	0.0	0.0	0.0	0.0	10
	E-learning hours included: 0.0						
	Additional information:						
	Discussion Solving tasks						
	Problem lecture						
Lecture with multimedia presentation							
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	10		41.0		49.0	100
Subject objectives	Presentation of the econometric model as a measurement tool in management sciences and economics. Acquisition of knowledge and practical skills in building, estimating, interpreting and evaluating econometric models.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[ZARZMU2_U01] The student has an in-depth ability to interpret socio-economic phenomena and current events in economic policy and economics, independently formulate his own opinions in this area, and propose adequate solutions in the case of changes occurring in these areas.	Student is able to obtain statistical data from available public sources and use them to build an econometric model.	[SU5] implementation of a problem task [SU6] demonstration of practical skills
	[ZARZMU2_W04] The student has an extended knowledge of the enterprise environment, its factors and changes occurring in this area, as well as the relations, significance and influence of the environment and stakeholders on the functioning of the enterprise. The student has expanded knowledge of tools for diagnosing macro- and micro-environment.	Possesses practical skills in the specification, estimation, property assessment and interpretation of econometric models using the GRETL program.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
	[ZARZMU2_K03] The student is aware of the need to identify critical complex problems, including economic and social ones, and to plan ways to solve them under changing and unpredictable conditions.	Is able to determine and interpret a forecast based on a previously specified econometric model	[SK1] oral statement/conversation/ discussion [SK5] implementation of a problem task
	[ZARZMU2_K02] The student is aware of the need to supplement and expand the acquired knowledge and skills and strives to combine knowledge from different fields and disciplines of science interdisciplinarily. The student can inspire others to learn.	Is able to use the knowledge acquired so far to independently investigate processes occurring in the enterprise using econometric models.	[SK1] oral statement/conversation/ discussion [SK6] demonstration of practical skills [SK8] observation of student's independent or team work
	[ZARZMU2_U05] The student can correctly select and apply advanced, complex methods and tools used in management and quality studies.	Potrafi wykorzystać dotychczas zdobytą wiedzę w celu samodzielnego badania procesów zachodzących w przedsiębiorstwie przy pomocy modeli ekonometrycznych.	[SU1] oral statement/conversation/ discussion [SU4] test/exam - oral or written
Subject contents	Econometrics as a scientific discipline. Objectives and methods of econometrics. Economic model and econometric model. Form, structure and classifications of econometric models. Interpretation of structural parameters of the model. Average parameters, marginal parameters, partial elasticities. Numerical and stochastic assumptions and consequences of their (non-)fulfillment. Estimation of model parameters using the least squares method (LSM). Properties of the LSM estimator, Gauss-Markov theorems. Economic and statistical verification of the model. Testing the significance of structural parameters of the model, adding and removing explanatory variables, testing restrictions imposed on structural parameters. Diagnostic tests for the normality of the distribution of random components, constancy of the variance of random components, lack of autocorrelation of random components. Testing the correctness of the functional form of the model. Measures of model fit to empirical data. Empirical examples of selected econometric models. Dynamic model: general form and detailed forms, classifications of dynamic models, interpretation of parameters, short- and long-term, individual and cumulative multipliers. Use of binary variables to model qualitative and cyclical phenomena. Elements of econometric forecasting. Determining forecasts based on an econometric model, estimating mean forecast errors, determining confidence intervals for the forecasted variable.		
Prerequisites and co-requisites	The student should have basic knowledge of: matrix calculus, differential calculus, basic descriptive statistics and mathematical statistics, including, respectively: the ability to add, multiply and invert matrices; the ability to differentiate functions of one and several variables, knowledge of basic measures of descriptive statistics and testing statistical hypotheses.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	written test	51.0%	100.0%
Recommended reading	Basic literature	Koop G., Wprowadzenie do ekonometrii. Oficyna Wolters Kluwer, Warszawa 2011. Kufel T., Ekonometria. Rozwiązywanie problemów z wykorzystaniem programu Gretl. PWN, Warszawa 2013. Maddala G.S., Ekonometria. PWN, Warszawa 2006.	
	Supplementary literature	Gruszczyński M. (red.), Mikroekonometria. Modele i metody analizy danych indywidualnych. Oficyna Wolters Kluwer, Warszawa 2010. Gruszczyński M., Kuszewski T., Podgórska M. (red.), Ekonometria i badania operacyjne. Podręcznik dla studiów licencjackich. PWN, Warszawa 2009. Kukuła K. (red.), Wprowadzenie do ekonometrii w przykładach i zadaniach. PWN, Warszawa 2004.	
	eResources addresses	Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed			

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