



Subject card

Subject name and code	METHODS OF QUANTITATIVE ANALYSIS (TEAM PROJECT), PG_00044959						
Field of study	Economic Analytics						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2022/2023		
Education level	second-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	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			English		
Semester of study	1	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Katedra Statystyki i Ekonometrii -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Piotr Paradowski				
	Teachers		dr Piotr Paradowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0	0.0	45
	E-learning hours included: 0.0						
METHODS OF QUANTITATIVE ANALYSIS (TEAM PROJECT) (2022/2023) - Moodle ID: 26810 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=26810							
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	45		10.0		70.0	125
Subject objectives	The aim of the course is to acquaint students with quantitative methods of analysis of economic phenomena						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_K03] can assess the validity of criteria and tasks in the projects implemented	Student learns how to use reliable datasets					
	[K7_U09] has the ability to use advanced mathematical tools to analyse and assess economic phenomena and to make decisions by economic operators	Student knows how to construct econometric models on the basis of cross-sectional, time series, and panel data.					
	[K7_W08] knows the principles of preparing and analysing revenues and costs in enterprises and financial institutions used in preparing reports and taking management decisions	Student knows quantitative methods which use statistical data, in particular financial and economic data					
	[K7_W02] has a broadened knowledge of how to describe economic phenomena using quantitative methods	Student knows quantitative methods in analysis of economic phenomena					
[K7_U08] has the ability to implement analytical methods to independently propose solutions to economic problems and verify their effectiveness	Student can apply selected methods to analysis in economy.						
Subject contents	Linear Regression with Single and Multiple Regressors; Hypothesis Tests and Confidence Intervals in Multiple Regression; Measures of Fit; Regression with a Binary Dependent Variable; Censored Regression Model; Multinomial Logistics Regression Model; Instrumental Variables Regression; Quasi-Experiments; Regression with Pooled Cross Sections across Time and Panel Data (differencing, fixed effects, and random effects); Hierarchical Models.						
Prerequisites and co-requisites	Statistics						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	team project	55.0%	50.0%
	exam	55.0%	50.0%
Recommended reading	Basic literature	<p>Wooldridge J.M. Introductory Econometrics: A Modern Approach, Cengage Learning; 7th edition, 2020</p> <p>Stock J.H & M.W. Watson, Introduction to Econometrics, Pearson Education; 4th edition, 2019.</p> <p>Acock A.C. A Gentle Introduction to Stata, Stata Press; 6th edition, 2018.</p> <p>Baltagi B. H. Econometric Analysis of Panel Data, Springer; 6th Edition, 2021</p>	
	Supplementary literature	<p>Verbeek M. A Guide to Modern Econometrics, Wiley; 5th edition, 2017.</p> <p>Greene W.H. Econometric Analysis, Pearson Prentice Hall; 8th edition, 2019.</p> <p>Long J.S. & Freese J. Regression Models for Categorical Dependent Variables Using Stata, Stata Press; 3rd edition, 2014</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<p>Exercise 1. Using data for the Czech Republic regress exports on labour productivity, openness of economy, unemployment rate and R&D expenditure. Evaluate the influence of each explanatory variable on exports. Indicate the regressor which affects the explained variable the most. Test the hypotheses.</p> <p>Exercise 2. Suppose that in a household saving equation, for the years 2014, 2015, and 2016, we let $kids_{it}$ denote the number of children in family i for year t. If the number of kids is constant over this three-year period for most households in the sample, what problems might this cause for estimating the effect that the number of children has on savings?</p>		
Work placement	Not applicable		