

Syllabus

Kursbeschreibung

Titel der Lehrveranstaltung	Ökonometrie
Code der Lehrveranstaltung	27278
Zusätzlicher Titel der Lehrveranstaltung	
Wissenschaftlich-disziplinärer Bereich	ECON-05/A
Sprache	Italienisch
Studiengang	Bachelor in Ökonomie, Politik und Ethik
Andere Studiengänge (gem. Lehrveranstaltung)	
Dozenten/Dozentinnen	<p>dr. Aldo Paolillo, Aldo.Paolillo@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/48246</p> <p>Dr. Gery Andres Diaz Rubio, GeryAndres.DiazRubio@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/51046</p> <p>Prof. Francesco Ravazzolo, Francesco.Ravazzolo@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/36066</p> <p>Dr. Sara Casagrande, Sara.Casagrande2@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/52142</p>
Wissensch. Mitarbeiter/Mitarbeiterin	
Semester	Zweites Semester
Studienjahr/e	2
KP	7
Vorlesungsstunden	42 (4 Prof Ravazzolo, 24 Dr. Diaz Rubio, 14 Dr. Casagrande)

Laboratoriumsstunden	21 (Dr. Paolillo)
Stunden für individuelles Studium	-
Vorgesehene Sprechzeiten	21 (9 Dr. Casagrande, 12 Dr. Diaz Rubio)
Inhaltsangabe	<p>The course explores various aspects of econometric analysis with the aim of providing analytical tools useful for the study and interpretation of complex phenomena in the economic and social sciences.</p> <p>The programme is divided into the following modules:</p> <ol style="list-style-type: none"> (1) matrix algebra; (2) the linear regression model and its main extensions; (3) ARCH and GARCH models for volatility analysis; (4) panel data analysis; (5) the Logit model. <p>Each topic is treated in a rigorous theoretical manner and accompanied by application examples. The teaching includes assisted exercises, aimed at fostering an in-depth understanding of the content, and the elaboration of empirical analyses on real data using the statistical software R</p>
Themen der Lehrveranstaltung	<p>Fundamentals of matrix algebra for econometrics</p> <p>Linear regression models: single and multiple regressors</p> <p>Statistical inference in linear regression: hypothesis tests and confidence intervals</p> <p>The maximum likelihood method</p> <p>Extensions of linear regression: autocorrelation and heteroschedasticity</p> <p>Volatility models: ARCH and GARCH</p> <p>Regression models for panel data</p> <p>Logit model</p>
Stichwörter	Linear regression; volatility, panel data, Logit model
Empfohlene	probability and statistics

Voraussetzungen	
Propädeutische Lehrveranstaltungen	Probability and Statistics course strongly recommended
Unterrichtsform	Lectures, practical workshops, group project
Anwesenheitspflicht	Participation is recommended, but not compulsory
Spezifische Bildungsziele und erwartete Lernergebnisse	<p>ILO (Intended Learning Outcomes)</p> <p>ILO 1 Knowledge and understanding</p> <p>ILO 1.1 estimation and interpretation of econometric models for empirical analysis of previous problems;</p> <p>ILO 1.2 ability to model social and economic phenomena;</p> <p>ILO 1.3 ability to give an economic interpretation to the results of various mathematical-statistical models applied to economics;</p> <p>ILO 1.4 basic knowledge of data management and computer programming for statistical and econometric analysis of socio-economic data;</p> <p>ILO 1.5 knowledge of the technical vocabulary of the subjects in this learning area.</p> <p>ILO 2 Ability to apply knowledge and understanding:</p> <p>ILO 2.1 ability to interact with native speakers fluently and spontaneously on economic topics;</p> <p>ILO 2.2 ability to independently analyse data and detect and explain relationships between real phenomena;</p> <p>ILO 2.3 ability to construct and verify simple statistical and econometric models;</p> <p>ILO 2.4 ability to use quantitative methods to solve problems in economics;</p> <p>ILO 2.5 ability to read, write and communicate in the technical language of quantitative methods in the three official languages of instruction</p> <p>ILO 3 Making judgement</p> <p>ILO 3.1 Acquisition of the capacity for judgement and methodological tools useful for the critical analysis of data, sources, assumptions and implications of scientific practice, the political, ethical and legal context within which economic</p>

	<p>phenomena are set and with which they interact</p> <p>ILO 4 Communication skills ILO 4.1 Fluency (oral and written) in Italian, German and English, including translation between these languages. Intercultural competence. Conceptual awareness, synthesis and written expression, particularly in the drafting of scientific or science-based documents</p> <p>ILO 5 Learning skills ILO 5.1 Promotion of critical thinking and analytical skills to focus on complex problems in their long-term dynamics and the variety of their implications, including ethical ones</p>
Spezifisches Bildungsziel und erwartete Lernergebnisse (zusätzliche Informationen)	
Art der Prüfung	<p>(60% of the final subject grade): Final written examination</p> <p>ILOs assessed: 1, 2, 3, 5</p> <p>(40% of the final subject grade): Group project Analysis of a real data set using the R</p> <p>ILOs assessed: 1, 2, 3, 4, 5</p>
Bewertungskriterien	<p>Final written examination: 60% Project: 40%</p> <p>Students must pass the final examination (i.e. correctly answer at least 60% of the questions in the questions in the examination) to obtain a passing grade in the course</p>
Pfichtliteratur	<p>Jim H. Stock and Mark W. Watson, <i>Introduction to Econometrics</i>, Pearson International 3d Edition.</p>
Weiterführende Literatur	

Weitere Informationen	
Ziele für nachhaltige Entwicklung (SDGs)	Geschlechter-Gleichheit, Hochwertige Bildung