Syllabus

Kursbeschreibung

Titel der Lehrveranstaltung	Ökonometrie
Code der Lehrveranstaltung	27278
Zusätzlicher Titel der Lehrveranstaltung	
Wissenschaftlich-disziplinärer Bereich	ECON-05/A
Sprache	Englisch
Studiengang	Bachelor in Ökonomie, Politik und Ethik
Andere Studiengänge (gem. Lehrveranstaltung)	
Dozenten/Dozentinnen	dr. Greta Goracci, Greta.Goracci@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/46136 Dr. Gery Andres Diaz Rubio, GeryAndres.DiazRubio@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/51046
Wissensch. Mitarbeiter/Mitarbeiterin	
Semester	Zweites Semester
Studienjahr/e	2
KP	7
Vorlesungsstunden	42 (18 Dr. Goracci, 24 Dr. Diaz Rubio)
Laboratoriumsstunden	21
Stunden für individuelles Studium	-
Vorgesehene Sprechzeiten	21 (9 Dr. Goracci, 12 Dr. Diaz Rubio)
Inhaltsangabe	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. The programme is divided into the following modules: (1) matrix algebra; (2) the linear regression model and its main extensions; (3) the ARCH and GARCH models for volatility analysis; panel data analysis; (5) the Logit model. Each topic is treated in a rigorous theoretical manner and accompanied by application examples. The teaching includes the assisted performance of exercises, aimed at fostering an in-depth understanding of the content, and the processing of empirical analyses on real data using the statistical software R.
Themen der Lehrveranstaltung	Fundamentals of Matrix Algebra for Econometrics Linear Regression Models: Single and Multiple Regressors Statistical Inference in Linear Regression: Hypothesis Testing and Confidence Intervals The Method of Maximum Likelihood Extensions of Linear Regression: Autocorrelation and Heteroskedasticity Volatility Models: ARCH and GARCH Regression Models for Panel Data Logit model
Stichwörter	Linear Regression; volatility; Panel data; Logit model
Empfohlene Voraussetzungen	Probability and Statistics
Propädeutische Lehrveranstaltungen	Probability and Statistics course strongly suggested
Unterrichtsform	Lectures, practical labs, group project
Anwesenheitspflicht	Attendance suggested, but not required
Spezifische Bildungsziele und erwartete	Knowledge and understanding At the end of the training course, students will have acquired the

Lernergebnisse	following knowledge and understanding:
	1. analysis of the demand and supply of goods and services;
	2. ability to understand the price mechanism in market economies;
	3. ability to apply the concepts of game theory to the economic behaviour of public and private actors;
	4. ability to understand the role of governments in market economies;
	5. ability to analyse the behaviour of economic variables in the short, medium and long run;
	6. ability to historically contextualise economic thinking and to assess the role of technology and social change on the evolution of economic thinking; 7. ability to understand complex economic texts in the three languages of instruction; 8. ability to analyse human behaviour in the field of economics;
	8. ability to analyse human behaviour in organisations
	9. ability to understand organisational decision-making theories;
	10. ability to understand how political choices are formulated and how these decisions affect the economy;
	11. recognising and understanding the conditions that are necessary for sustainable economic development taking into consideration the environment and natural resources;
	12. understanding of the reasons for economic growth and development of countries;
	13. understanding of the basic principles of functioning of labour markets;
	14. estimation and interpretation of econometric models for the empirical analysis of the above problems.
	At the end of the course, students will have acquired the following knowledge and understanding:
	1. knowledge of mathematical techniques for solving optimisation problems;
	2. knowledge of probabilistic and inferential tools for using statistical models;
	3. ability to model social and economic phenomena;
	4. ability to give an economic interpretation to the results of the various mathematical-statistical models applied to economics;
	5. basic knowledge of data management and computer programming for statistical and econometric analysis of socio-economic data

	6. knowledge of the technical vocabulary of the subjects in this learning area. Applying knowledge and understanding: ability to interact fluently and spontaneously with native speakers on economic topics; ability to independently analyse data and identify and explain relationships between real phenomena; ability to construct and verify simple statistical and econometric models; ability to use quantitative methods to solve economic problems; ability to read, write and communicate in the technical language of quantitative methods in the three official languages of instruction. Autonomy of judgement Acquisition of the capacity for judgement and of the methodological tools useful for the critical analysis of data, sources, assumptions and implications of scientific practice, of the political, ethical and legal context within which economic phenomena are set and with which they interact Communication skills Fluency (oral and written) in Italian, German and English, including translation between these languages. Intercultural competence. Conceptual awareness, synthesis skills and written expression, particularly in the drafting of scientific or science-based documents Learning skills Promotion of critical thinking and analytical skills to focus on complex problems in their long-term dynamics and in the variety of their implications, including ethical ones
Spezifisches Bildungsziel und erwartete Lernergebnisse (zusätzliche Informationen)	
Art der Prüfung	Final Exam (60% of the final grade in the subject): Written exam

	Assignment (40% of the final grade in the subject): Analysis of a real dataset through the R software
Bewertungskriterien	Final exam: 60% Assignment: 40% Students must pass the final exam (i.e. answer correctly at least 60% of the questions in the exam) to receive a passing grade in the course.
Pflichtliteratur	Jim H. Stock and Mark W. Watson, *Introduction to Econometrics*, Pearson International 3d Edition.
Weiterführende Literatur	
Weitere Informationen	
Ziele für nachhaltige Entwicklung (SDGs)	Geschlechter-Gleichheit, Hochwertige Bildung