# Syllabus

## *Kursbeschreibung*

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| **Titel der Lehrveranstaltung** | Wirtschaftsökonometrie |
| **Code der Lehrveranstaltung** | 27347 |
| **Zusätzlicher Titel der Lehrveranstaltung** | |
| **Wissenschaftlich-disziplinärer Bereich** | SECS-P/05 |
| **Sprache** | Englisch |
| **Studiengang** | Bachelor in Wirtschaftswissenschaften und Betriebsführung |
| **Andere Studiengänge (gem. Lehrveranstaltung)** | |
| **Dozenten/Dozentinnen** | Prof. Francesco Ravazzolo, Francesco.Ravazzolo@unibz.it https://www.unibz.it/en/faculties/economics-management/academic-staff/person/36066 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** | Erstes Semester |
| **Studienjahr/e** | 3 |
| **KP** | 6 |
| **Vorlesungsstunden** | 36 |
| **Laboratoriumsstunden** | 20 |
| **Stunden für individuelles Studium** | - |
| **Vorgesehene Sprechzeiten** | |
| **Inhaltsangabe** | - Matrix Algebra, Stochastic Issues and Distribution Theory<br><br>- Linear Regression with a Single Regressor and with¿ Multiple |

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| | Regressors<br><br>- Hypothesis Tests and Confidence Intervals in Linear¿Regression Models<br><br>- Special topics in linear regressions, such as¿ heteroscedasticity and autocorrelation<br><br>- Regression with Panel Data (Advantages and limitations of¿ fixed and random effects regression)<br><br>- Regression with a Binary Dependent Variable, Categorical¿ data analysis |
| **Themen der Lehrveranstaltung** | This introductory econometrics course provides a comprehensive overview of statistical methods for analyzing economic data. It starts with the foundational concepts of Matrix Algebra, Stochastic Issues, and Distribution Theory, which are essential for understanding the underlying principles. The core of the course focuses on Linear Regression, beginning with a single regressor and expanding to models with multiple regressors. The students will learn to perform Hypothesis Tests and construct Confidence Intervals to draw valid conclusions from your data. The curriculum also addresses common real-world challenges in regression, such as heteroscedasticity and autocorrelation. Finally, the course covers advanced topics in data analysis, including a detailed examination of Regression with Panel Data, exploring the differences between fixed and random effects, and methods for analyzing qualitative data through Regression with a Binary Dependent Variable and Categorical Data Analysis. |
| **Stichwörter** | Linear Regression, Hypothesis Testing, Panel and Binary Data, Econometric models |
| **Empfohlene Voraussetzungen** | Basic knowledge of statistics and mathematics |
| **Propädeutische Lehrveranstaltungen** | |
| **Unterrichtsform** | Lectures, practical labs, group project, face-to-face coaching and mentoring, guest lectures from external experts. |
| **Anwesenheitspflicht** | Attendance not compulsory but recommended |

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| **Spezifische Bildungsziele und erwartete Lernergebnisse** | |
| **Spezifisches Bildungsziel und erwartete Lernergebnisse (zusätzliche Informationen)** | |
| **Art der Prüfung** | For attending students doing the mid-term assignment: written exam and a mid-term assignment. The written exam includes an essay and practitcal questions to test knowledge of theory, method and application skills. Oral group assignment carried in groups in the mid-term in a form of a presentation.<br>For non-attending students or attending students without mid-term assignment: written exam. The written exam includes two essays and several practical questions to test knowledge of theory, |
| **Bewertungskriterien** | Final mark for students doing the mid-term assignment is a sum of marks from the group assignment and a written exam.<br>Student will analyse econometric problems in both academic and practical contexts, displaying effective quantitative problem-solving skills. With a clarity of answers and mastery of research method, ability to collect and process the data, make critical comparisons and judgements, summarize, establish and measure the relationships within the project. An assignment also test student's ability to work in a team, creativity, IT and communication skills, critical thinking, cooperation and demonstrate individual's reflection and judgement.<br>Final written exam.<br>Final mark for students without the mid-term assignment is the result of the written exam. |
| **Pflichtliteratur** | Slides provided by professor. |
| **Weiterführende Literatur** | Christiaan Heij, Paul de Boer, Philip Hans Franses, Teun Kloek, and Herman K. van Dijk, Econometric Methods with Applications in Business and Economics, Oxford University Press.<br><br>Marno Verbeek, A Guide to Modern Econometrics, Wiley 4th Edition.<br><br>Jim H. Stock and Mark W. Watson, Introduction to Econometrics, |

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| | Pearson International 3d Edition. |
| **Weitere Informationen** | |
| **Ziele für nachhaltige Entwicklung (SDGs)** | Hochwertige Bildung, Geschlechter-Gleichheit, Partnerschaften zur Erreichung der Ziele, Industrie, Innovation und Infrastruktur, Maßnahmen zum Klimaschutz, Menschenwürdige Arbeit und Wirtschaftswachstum |