Universität Regensburg

Introductory Econometrics

22038/22039

Winter 2023

Lecturer:	Dr. Aleksandr Alekseev	**Lectures:**	Mondays 12pm–2pm, H4, Zoom
Email:	aleksandr.alekseev@ur.de	**Tutorials 1:**	Mondays 4pm–6pm, H2, Zoom
Office:	RW(L) 518	**Tutorials 2:**	Wednesdays 12pm–2pm, H51, Zoom
Office Hours:	By appointment		

Tutor:	Ann-Katrin Wartenga
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GRIPS Page: https://elearning.uni-regensburg.de/course/view.php?id=44666

Overview

This course introduces students to econometric methods with a focus on linear models. Subjects include the classical linear regression model, ordinary least squares estimator and its properties, multiple regression, inference and hypotheses testing, predictions, heteroskedasticity, and model diagnostics. Students will learn the tools needed to conduct their own empirical economic research. The course will guide students through the intuition behind the econometric methods, formal derivations and proofs, as well as practical tools to implement these methods in the R programming language.

Learning Objectives

At the end of the course, the students should be able to

- estimate simple and multiple regression models
- interpret the regression coefficients
- interpret the measures of goodness-of-fit
- use estimated models for prediction
- conduct hypotheses testing
- conduct model diagnostics

Prerequisites: Knowledge of introductory-level statistics, probability theory, and linear algebra is helpful but not required.

Course Outline:

1. Introduction
2. The Regression Model
3. The OLS Estimator
4. Hypotheses Testing
5. Asymptotic Properties of the OLS
6. Interpretation of Coefficients
7. Prediction
8. Heteroskedasticity
9. Model Diagnostics

Literature:

- Wooldridge, J.M. 2016. *Introductory Econometrics: A Modern Approach*, sixth ed. Cengage Learning
- Stock, J.H., and M.W. Watson. 2018. *Introduction to Econometrics*, 4th ed. Pearson
- Angrist, J.D., and J.S. Pischke. 2014. *Mastering 'Metrics: The Path from Cause to Effect*. Princeton University Press

Online Resources:

- Slides by Dr. Rolf Tchernig (Chair of Econometrics) in German and English
- Links to econometric blogs, R and LaTeXresources from the Chair of Econometrics
- R for Data Science

Grading Policy: 100% of the grade will go to the final exam.

1,0:	95 to 100	3,3:	60 to 64
1,3:	90 to 94	3,7:	55 to 59
1,7:	85 to 89	4,0:	50 to 54
2,0:	80 to 84	4,3:	45 to 49
2,3:	75 to 79	4,7:	40 to 44
2,7:	70 to 74	5,0:	less than 40
3,0:	65 to 69		

Course Policies:

1. This course syllabus provides a general plan for the course, deviations may be necessary
2. Your constructive assessment of this course plays an indispensable role in shaping education in the University. Upon completing this course, please take time to fill out the course evaluation
3. If you have read the syllabus up to this point, send me an email with "Introductory Econometrics" in the subject line and "Syllabus" in the body
4. Students are expected to behave properly in class so as not to interfere with the learning environment of others in the classroom. This includes showing up for class on time, not leaving early (or at least being quiet if either of those do happen), not talking to neighbors in class, not using cell phones during class, etc. All cell phones and other noise-making devices must be turned off during exams. Students not adhering to these guidelines may be asked to leave the class and may be subject to an administrative withdrawal (depending on the severity of the infraction).