

COURSE SYLLABUS

Doctoral course: Microeconometrics using Stata 7,5 credits

Course code:
Reviewed by: RFB
Approved by: RFB
Valid as of: 2025-09-08
Version: 2
Reference number:

Education Cycle: Third cycle, doctoral program course
Doctoral program subject: Economics

Purpose:

The purpose of the course is to prepare PhD students in economics and related disciplines to conduct empirical analyses of micro-level data – e.g., on individuals, firms, and transactions – using econometric methods in Stata.

Intended learning outcomes:

On completion of the course, the students will be able to:

Knowledge and understanding

1. Demonstrate a broad understanding of the theoretical foundations of modern microeconomic methods.
2. Demonstrate an understanding of the fundamental problem of causal inference in nonexperimental situations, including the estimation of treatment effects.
3. Demonstrate knowledge about the occurrence of non-standard error issues.

Skills and abilities

4. Demonstrate skills to process data using Stata.
5. Demonstrate skills to use Stata to apply microeconomic methods in empirical data analysis.
6. Demonstrate the ability to write Stata scripts that support replicability and reproducibility of analyses and results.

Judgement and approach

7. Demonstrate the ability to critically assess the robustness of obtained results and to critically discuss the limitations of the various methods.

Content:

The course will provide an up-to-date overview on the most commonly used microeconomic methods, such as methods for working with clustered and nested data, estimation involving limited dependent variables, causal inference from observational data, methods for policy evaluation, and

open science principles. The course emphasizes hands-on practice, where students apply the methods to practical examples and datasets.

Examples of covered topics:

- Replicability and reproducibility
- Non-linear models
- Cluster-robust inference
- Difference-in-differences estimation
- Instrumental variables
- Regression discontinuity designs
- Matching

Type of instruction:

Lectures, seminars, computer labs, and assignments.

Prerequisites:

Admitted to a doctoral program in economics or a discipline of a recognized business school or university. Basic courses in statistics, econometrics, or quantitative methods are recommended but not required.

Examination and grades:

The course will be examined in the following way:

- A presentation fulfils ILOs 1, 2, 3 and 7 (50%)
- A written assignment fulfils ILOs 4-6 (50%)

The grades are “pass” or “fail”. All examination elements need to be passed for a “pass” on the course.

Course evaluation:

A course evaluation will be conducted at the end of the course.

Literature:

- Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics – Methods and Applications*. Princeton University Press.
- At the beginning of the course, students will receive a selection of recent research articles that demonstrate the application of the methods taught.