

COURSE SYLLABUS

Doctoral course: Microeconometrics using STATA 7,5 credits

Course code:
Reviewed by: RFB
Approved by: RFB
Valid as of: 2017-03-13
Version: 1
Reference number: 2016/1093-41

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

Purpose:

The purpose of the course is to prepare PhD students in Economics, or related subjects, for doing empirical econometric analyses in their research using individual level data of persons, households or companies.

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 non-experimental situations, including the estimation of treatment effects.
3. Demonstrate knowledge about the occurrence of non-standard error issues.

Skills and abilities

4. Demonstrate the skills to use STATA to implement microeconomic models for a given approach, and to transform and handle data within STATA.
5. Demonstrate the ability to write own codes and programs in STATA for performing non-standard tasks.
6. Demonstrate the ability to perform simulations in STATA in order to investigate the small sample properties of various estimators.

Judgement and approach

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

Content:

The course will provide an up-to-date overview on the most commonly used microeconomic methods, e.g., propensity matching, instrumental variables methods, panel data methods including

dynamic models, simulation, bootstrapping inference, quantile regression techniques and non-linear models for binary, multinomial or count outcomes.

The contents of this course include

- (i) Regression basics
- (ii) Simulation basics
- (iii) Experimental versus non-experimental data
- (iv) STATA basics including introduction to STATA programming
- (v) Linear (dynamic) panel data models including diff-in-diff methods
- (vi) Bootstrapping inference
- (vii) Regression discontinuity designs
- (viii) Quantile regression methods
- (ix) Non-linear (panel) models

Type of Instruction/Teaching format:

Lectures, computer labs, and homework assignments.

Prerequisites:

Admitted to a doctoral programme in Economics or a related subject of a recognized business school or university. Basic courses in Statistics, introductory course in Econometrics/Quantitative Methods is recommended, but not required

Examination and grades:

The course will be examined in the following way:

- Written examination at the end of the course fulfill ILOs 1, 2 and 7
- Written assignments fulfill ILOs 3-6

The grades are 'pass' or 'fail'

Course evaluation:

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

Literature:

See separate literature list.

- A. Colin Cameron and Pravin K. Trivedi, Microeconometrics Using Stata, Stata press
- Christopher F. Baum, An Introduction to Stata programming, Stata press, latest edition

Additional readings:

- Badi Baltagi, Econometric Analysis of Panel Data, 4th Edition, Wiley, latest edition.
- A. Colin Cameron and Pravin K. Trivedi, Microeconometrics: Methods and Applications, Cambridge University Press, latest edition
- Joshua Angrist and Jörn-Steffen Pischke, Most harmless Econometrics. An Empiricist's Companion. Princeton university press, latest edition.
- Several articles provided when the course starts.