



**COURSE TITLE** Introduction to Econometrics using Stata

**ECTS:** 3 ESPB

### LECTURERS

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### AIMS OF THE COURSE

The objective of this course is to provide the basic knowledge in econometrics and prepare participants for empirical work in economics. This one-week school (5 days) gives the opportunity to consider actual economic data to test economic theories with a direct application in Stata. The course is interactive and includes both a theory review and computer practical sessions using Stata. Within practical sessions, real data econometric issues will be covered using both cross-sectional and time series data.

### COURSE TOPICS

- Simple regression analysis
- Properties of OLS estimators and hypothesis testing
- Multiple regression analysis: estimation and statistical inference
- Multiple regression analysis: multicollinearity, dummy variables and instrumental variables
- Heteroscedasticity and autocorrelation
- Model selection: criteria and test

### COURSE OUTCOMES

Upon completion of the course it is expected that the student is able:

- To apply the classical regression model to cross-sectional and time-series data.
- To understand:
  - assumptions required in the application of classical regression model
  - reasons for expecting violations of these assumptions in certain circumstance
  - tests for violations
  - potential remedial measures.



- To competently use presented econometric methods to quantify economic relations using Stata in simple applications.

## EVALUATION

The course participant can achieve a total of 100 points through the following activities:

- Two homeworks evaluating if the student is able to estimate the economic model and interprets the results, covering also a few theoretical questions for testing basic econometric concepts.