

## ECONOMETRICS II

	<i>Lecturer</i>	<i>Teaching Assistants</i>
<b>Name</b>	Nikolas Mittag / Dragana Stanišić	Jelana Plazonja
<b>Office</b>	304 / 322	<a href="mailto:jplazonj@cerge-ei.cz">jplazonj@cerge-ei.cz</a>
<b>Phone</b>	224 005 128 /224 005 227	
<b>e-mail</b>	<a href="mailto:nikolas.mittag@cerge-ei.cz">nikolas.mittag@cerge-ei.cz</a> / <a href="mailto:dragana.stanistic@cerge-ei.cz">dragana.stanistic@cerge-ei.cz</a>	Gega Todua <a href="mailto:gega.todua@cerge-ei.cz">gega.todua@cerge-ei.cz</a>
<b>Office hours</b>	Tuesday 16:30 – 18:30 or by appointment	TBA

### Course information

This course is the third part of the three-semester Statistics-Econometrics sequence. It will build on the knowledge acquired in Econometrics I and expand it. New topics will include the econometrics of panel data and the limited dependent variable models. For each topic, we will start with the underlying econometric model and its properties, learn the appropriate estimation and testing methods, and study examples of their empirical applications. The goal of this course is to equip students with basic understanding of the standard econometric methods, as well as with estimation skills and experience with empirical analysis.

The necessary prerequisites are the preceding two courses of the first-year sequence, i.e., Statistics and Econometrics I.

**Course Homepage: to be announced at the beginning of the semester.**

### Course outline

#### I. Additional Topics in Cross-Sectional Estimation

- Review of the Basics
- Omitted Variable Bias and Proxy Variables
- Properties of OLS under Measurement Error
- IV Solutions and Indicators
- Missing Data and Nonrandom Samples

#### II. Panel Data Methods

- Pooling Cross Sections across Time
- Fixed Effect Models
- Random Effect Models
- Hausman Test
- Non-spherical Disturbances and Robust Covariance Estimation
- Repeated Cross Sections, Pseudo Panels, Differences-in-differences Method

- Application to Other Data Structures
- III. Limited Dependent Variable Models and Sample Selection

- Maximum Likelihood Estimation
- Binary Outcome Models
- Ordered Multinomial Models
- Unordered Multinomial Models
- Censored and Truncated Regression
- Sample Selection Models

### **Requirements and grading**

Midterm exam (40%)

Final exam (40%)

Theoretical and empirical assignments (20%)

### **Software:**

Students may use any software they like when solving the empirical assignments, but the official course's software will be STATA, so that most of the in-class examples and assignment solutions will be in STATA.

### **Required readings (selected chapters)**

Cameron, A.C. and P.K. Trivedi, [\*Microeconometrics: Methods and Applications\*](#), Cambridge University Press, 2005.

Greene, W.H. *Econometric Analysis*, 5th edition, Prentice Hall, 2003.

Wooldridge, J.M. *Introductory Econometrics: A Modern Approach*, 2nd ed, Thomson/South-Western, 2003.

Wooldridge, J.M. *Econometric Analysis of Cross Section and Panel Data*, Massachusetts Institute of Technology, 2002.

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LECTURES: Monday and Tuesday 15:00-16:30, room 320

EXERCISE SESSION: Monday 13:30-15:00, room 320

IMPORTANT DATES AND DEADLINES:

Midterm Exam: May 27, during the Tuesday's class (15:00-16:30)

Final Exam: Monday, July 15, during the Tuesday's class (15:00 – 16:30)

Webpage: <http://home.cerge-ei.cz/dragana/teaching.html>