Type and level of studies: PhD	
Title of the study program: (303) Statistics	
Subject title: Panel Data Econometrics	
Subject code: DEPA	
Number of ECTS: 9	
Subject status (Compulsory / Elective): Elective	
Teacher/s (Name, last name): Radmila S. Dragutinović Mitrović, Aleksandra Č. Nojković	

Number of active teaching lessons:				Other lessons:
Lectures: 3	**Practice classes**: 0	**Other forms of teaching**: 0	**Study research work**: 3	0

Prerequisite: None

Subject objective: This course introduces key econometric panel data methods and models, as the basis for empirical analysis of economic relations based on panel data samples. Both theoretical aspects of panel data methodology and its application are considered, making students able to identify various segments of economic analysis in which panel data can be used.

Subject outcome (gained knowledge): Students acquire theoretical knowledge on different panel data models and methods of estimation and testing hypotheses, as well as practical ability to apply that knowledge in quantifying economic relations. Using adopted knowledge, students should be able to conduct econometric panel data analyses in different areas of economics and to derive correct statistical and economic conclusions.

Subject content/structure. The subject contains three parts: (1) Linear panel data models: fixed effects and radom effects models – assumptions and estimation methods; Violating of assumptions, hypothesis testing; singly and double endogenous regressors; Seemingly unrelated regresion equations and simultaneous equations with error components; Dynamic panel data models; (2) Nonstationarity of panel data: panel unit root tests, panel cointegration - tests and estimation methods; (3) Panel data models with discrete dependent variable: models for binary choice (probit and logit panel data models), estimation and hypothesis testing.

Teaching methods: Teaching is carried out through lectures, consultations, study research work and seminars. Lectures cover topics on contemporary theoretical panel data models and their role in economic research through the analysis of empirical examples. Consultations involve the discussion on theoretical literature and on practical problems in empirical modeling by using the STATA program. The seminars consist of presentation of obtained results of study research work.

Grading (maximum number of points 100)			
Pre-examination obligations	**Points**	**Final exam**	**Points**
Activities during lectures Yes	40	**Written exam**	
Practice lessons		**Oral exam** Yes	60
Semester papers		....	
Colloquium/a			

Literature:

No.	Author	Title	Publisher	Year
1.	Arellano M.	Panel Data Econometrics (Advanced Texts in Econometrics)	Oxford University Press	2003.
2.	Baltagi, B.H. (ed.)	Nonstationary Panels, Panel Cointegration and Dynamic Panels	Elsevier Science, Amsterdam	2000.
3.	Baltagi, B.H.	Econometric Analysis of Panel Data	John Wiley & Sons, 5rd edition	2013.
	Dragutinović Mitrović R.	Analiza panel serija	Zadužbina Andrejević, Beograd	2002.
4.	Hsiao, C.	Analysis of Panel Data	Cambridge University Press, 2nd edition	2003.
5.	Jovičić, M. and Dragutinović-Mitrović, R.	Econometric methods and models (Chapters 8 and 9), in Serbian	CID, Faculty of Economics, Belgrade	2011.
6.	Matyas, L. and Sevestre, P. (eds.)	The Econometrics of Panel Data, Fundamentals and Recent Developments in Theory and Practice	Springer, 3rd edition	2008.