INSTITUT FÜR HÖHERE STUDIEN
INSTITUTE FOR ADVANCED STUDIES
Vienna

TU WIEN CONTINUING EDUCATION CENTER

M.Sc. Economics

Code:		**Type:**	M.Sc. 2nd year, spring 2011

Title:	Econometrics (Elective course)

Lecturer:	Timothy G. Conley

ECTS:	3	**Contact hours (per term):**	10 á 110 min.20

Semester:	Spring 2011	**Frequency of the lecture:**	10 units

Dates:	June 14 until June 24, 2011

Prerequisites:	Familiarity with First-year Graduate-Level Econometrics/Statistics. Basic Time Series Analysis is Particularly Helpful

Learning objectives (What are the intended learning outcomes? Which skills will be acquired?):

The focus of this course will be econometric methods for analysis of dependent data in spatial and space-time series settings. Specific topics will include generalized method of moments (GMM) estimation, spatial autoregressions (SARs), and covariance matrix estimation. Emphasis will be on understanding how to use econometric tools in practice.

Content (Which professional competence and which contents will be imparted?):

- Introduction to Models of Spatial and Space-Time Dependent Data and the Issues that Arise for Statistical Inference in Such Settings
- GMM Estimation and Nonparametric Inference with Spatial and Space-Time Dependence
- Cluster Dependence and its Relationship to Spatial Dependence and Associated Estimation Methods
- Spatial Models for Large-Dimension Time Series

Teaching approach (Description of the learning and teaching methods):

Lecture.

Workload (Definition of workload (ECTS), divided in pre-modules (e.g. pre-readings), core-modules (contact hours), post-modules (e.g. case studies)):

/

M.Sc. Economics

Language of instruction (Information on the language of teaching):
English

Obligatory literature (E.g. scripts, books, articles, cases, papers):

- Bester, Alan, Timothy G. Conley, and Christian Hansen "Inference with Dependent Data Using Cluster Covariance Estimators, " Forthcoming *Journal of Econometrics*.
- Chen, Xiaohong and Timothy G. Conley [2001] "A New Semiparametric Spatial Model for Panel Time Series", *Journal of Econometrics* 105: 59-83.
- Conley, Timothy G. [2006] *New Palgrave Dictionary of Economics* Entry for Spatial Econometrics
- Conley, Timothy G. [1999] "GMM Estimation with Cross Sectional Dependence", *Journal of Econometrics* 92: 1-45.
- Conley, Timothy G., and Bill Dupor ``A Spatial Analysis of Sectoral Complementarity" *Journal of Political Economy*, 2003, 111(2), pp . 311-52..
- Lee, Lung-fei. "Identification and Estimation of Econometric Models with Group Interactions, Contextual Factors, and Fixed Effects." *Journal of Econometrics* Volume 140, Issue 2, October 2007, Pages 333--374.
- Pinkse, Joris and Margaret Slade [1998] "Contracting in Space: An Application of Spatial Statistics to Discrete Choice Models" *Journal of Econometrics* 85:125-154.
- Wall, Melanie (2004), "A Close Look at the Spatial Structure Implied by the CAR and SAR Models", *Journal of Statistical Planning and Inference*, Volume 121, pp. 311-324.
- Wooldridge, J (2003), "Cluster-Sample Methods in Applied Econometrics", *American Economic Review*, Vol. 93(2), pp. 133-138.

Additional literature (E.g. books, articles, cases, papers):
Cressie, Noel *Statistics for Spatial Data* Wiley 1993.

Mode of examination (Mode of the examinations and tests (e.g. oral or written examination, lecture, homework, papers, class participation):
Final exam.

Grading (A maximum of 20% outside the class room):
20% homework/project 80% final exam

Special features (E.g. excursion, guest speaker):
/

M.Sc. Economics

Contact information:	Office hours:
Prof. Tim Conley The University of Western Ontario e-Mail: tconley3@uwo.ca Address: 182 Commissioners Road East London Ontario N6C 2T1 Phone: (519) 661-2111 ext 88908	By appointment

Course website:
https://cecnet.tuwien.ac.at/