COURSE DISCRIPTION

1. GENERAL

SCHOOL	ENVIRONMENT, GEOGRAPHY AND APPLIED ECONOMICS
DEPARTMENT	GEOGRAPHY
LEVEL OF COURSE	Postgraduate
COURSE CODE	**SEMESTER** 2d
COURSE TITLE	METHODS OF REGIONAL ANALYSIS WITH EMPHASIS ON SPATIAL ECONOMETRICS

STRUCTURE OF TEACHING ACTIVITIES	TEACHING HOURS PER WEEK	NUMBER OF CREDITS ALLOCATED (ECTS)
Lectures and Laboratory Classes	2	7,5

TYPE OF COURSE	Optional
PREREQUISITES	-
LANGUAGE OF INSTRUCTION	GREEK
COURSE OFFERED TO ERASMUS STUDENTS	YES (in English if required)
(URL)	

2. EXPECTED LEARNING OUTCOMES

Learning outcomes
Describe the objectives of the course as well as the expected learning outcomes

The aim of the course is to provide the students with the fundamental tools, i.e. concepts, methods and techniques, to empirically investigate regional and spatial phenomena. In order to achieve this aim, a wide range of statistical and econometric techniques are presented in order to describe, analyze and model spatial data, placing special emphasis on the field of spatial econometrics. To achieve a more thorough knowledge of these techniques, particular attention will be given to real-world applications and data. By the end of the course students should be able to:

- deeply understand the importance of the methods addressed for the examination of socio-economic phenomena that have spatial dimension.
- Identify the core concepts and methods of Regional Analysis and Spatial Econometrics.
- employ the appropriate methods and techniques in spatial research problems, interpreting the results and being aware of the limitations.

3. COURSE CONTENTS

The course contains the following topics: Introduction to Methods of Regional Analysis - Indicators of Regional Specialization/Concentration - Shift-Share and Spatial Shift-Share Analysis - Regional Multipliers - Composite Indicators - Introduction to Econometrics (e.g. Specification of a Linear Model, Cross-Section and Panel Data Analysis, Specification Tests, Variable Selection) - Introduction to Spatial Econometrics (Methods, weight matrices, Specification Tests) - Advanced Topics in Spatial Econometrics (Panel techniques, Regime analysis).

4. TEACHING AND ASSESSMENT METHODS

TYPE OF LECTURES	In class lectures Laboratory Lectures and Practice	
ICT USE	ICT use, Internet use and e-class	
TEACHING STRUCTURE		

Activity	Hours per semester
Lectures	26
Weekly assignments	26
Project	55
Studying	75
TOTAL	*182*

ASSESSMENT METHODS	Assessment Language: Greek Assessment Methods The assessment of the module will be based on an oral exam (40%), a written exam (30%) at the end of the semester, as well as two short assignments (30%).

5. RECOMMENDED READING

● Anselin L. (1988), *Spatial Econometrics: Methods and Models*, Kluwer

● Anselin L. (2003), Spatial Externalities, Spatial Multipliers and Spatial Econometrics, *International Regional Science Review*, 26(2): 153-166

● Anselin L. (2003), *GeoDa 0.9.3 User's Guide*, University of Illinois at Urbana-Champaign

● Anselin L. (2005), *GeoDa 0.9.5-I Release Notes*, University of Illinois at Urbana-Champaign

● Armstrong, H. And J. Taylor (2003). *Regional Economics and Policy*. Oxford: Blackwell

● Artelaris P. (2014), Local versus regime convergence regression models: a comparison of two approaches, *GeoJournal*, DOI: 10.1007/s10708-014-9551-0

● Florax R. J. G. M. and van der Vlist A. (2003), Spatial Econometric Data Analysis:

Moving beyond Traditional Models, *International Regional Science Review*, 26(3): 223-243

- Greene W. (2008), *Econometric Analysis*, Prentice Hall

- Gujarati D. N. (2003), *Basic* Econometrics, McGraw Hill

- OECD (2008), Handbook on Constructing Composite Indicators: Methodology and User Guide

- Ord J. K. and Getis A. (1995), Local Spatial Autocorrelation Statistics: Distributional Issues and Application, *Geographical Analysis*, 27: 286-305

- Petrakos G. και Artelaris P. (2009), "European Regional Convergence Revisited: A Weighted Least Squares Approach", *Growth and Change*, 40(2): 319-331