COURSE OUTLINE

(1) GENERAL

SCHOOL	SCHOOL OF INFORMATION SCIENCES & TECHNOLOGY		
ACADEMIC UNIT	DEPARTMENT OF STATISTICS		
LEVEL OF STUDIES	1st Cycle (UNDERGRADUATE)		
COURSE CODE	**6175**	**SEMESTER**	**7th**
COURSE TITLE	**Econometrics**		

INDEPENDENT TEACHING ACTIVITIES	**WEEKLY TEACHING HOURS**	**CREDITS**
Lectures	4	8
Workshops		
Labs	2	

COURSE TYPE	Elective
PREREQUISITE COURSES:	Regression and Introduction to economic analysis
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES
COURSE WEBSITE (URL)	https://www.dept.aueb.gr/en/stat/content/econometrics-7-ects

(2) LEARNING OUTCOMES

Learning outcomes
Upon successful completion of the course students will be able to: know, identify, control and suggest ways to deal with violations of classical hypotheses of the classic linear multivariate regression model: autocorrelation - heteroscedasticity and multilinearity using linear algebra. Also, know what is, when they are used, under which conditions and how they are estimated: the simultaneously determined regressions – Systems of interdependent variables, the structural and reduced models and the Seemingly Unrelated Regression Equation Systems. Applications using R.
General Competences
• Search, analysis and synthesis of data and information, using the necessary technologies • Adaptation to new situations • Decision-making • Autonomous work • Teamwork • Working in an international environment • Working in an interdisciplinary environment • Generating new research ideas

• Respect for diversity and multiculturalism
• Respect for the natural environment
• Demonstrating social, professional and ethical responsibility and sensitivity to gender issues
• Exercising criticism and self-criticism
• Promoting free, creative and inductive thinking

(3) SYLLABUS

Introduction to econometrics. Hypotheses and variable stability tests – Hypotheses violations (using linear algebra). Systems of Codependent Variables, Structural – Reduced, Financial systems: Concept – Interpretation – Estimation. Consequences of ignoring explanatory variables endogeny. Identifying the parameters of structural equations/ regressions of a system: Identification conditions. The case of under-identification and over-identification.
Estimating structural parameters with Indirect Least Squares Method (ILS) – Instrumental Variables Method (IV) – 2SLS – 3SLS.
Seemingly Unrelated Regression Equation Systems (SURE): Estimation, Parameter Heterogeneity Test, models PANEL. Applications with economic data using R.

(4) TEACHING and LEARNING METHODS - EVALUATION

<table>
<tr><td>DELIVERY
Face-to-face, Distance learning, etc.</td><td>Face-to-face</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY</td><td>YES</td></tr>
<tr><td>TEACHING METHODS</td><td>
<table>
<tr><th>Activity</th><th>Semester workload</th></tr>
<tr><td>Lectures</td><td>35</td></tr>
<tr><td>Lab Exercise</td><td>18</td></tr>
<tr><td>Studying and Analyzing Bibliography</td><td>43</td></tr>
<tr><td>Tutorial</td><td>13</td></tr>
<tr><td>Project</td><td>13</td></tr>
<tr><td>Assignment</td><td>9</td></tr>
<tr><td>Self Study</td><td>44</td></tr>
<tr><td>Course Total</td><td>175</td></tr>
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<tr><td>STUDENT PERFORMANCE EVALUATION</td><td>Written examination at the end of the semester: 80%
Written Assignment (Project): 20%

Information is available at eclass</td></tr>
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(5) ATTACHED BIBLIOGRAPHY

- Τζαβαλής Η., (2008). «Οικονομετρία», Εκδόσεις Οικονομικού Πανεπιστημίου Αθηνών.
- JohnstonJ., DinardoJ., Οικονομετρικές Μέθοδοι, Εκδόσεις Κλειδάριθμος ΕΠΕ, 2005.
- Δριτσάκη Ν. Χάιδω, Δριτσάκη Ν. Μελίνα (2013) "Εισαγωγή στην Οικονομετρία με τη Χρήση του Λογισμικού EViews" Εκδ. Κλειδάριθμος.