

COURSE OUTLINE: ECONOMETRICS II

GENERAL

SCHOOL	ECONOMICS AND BUSINESS		
ACADEMIC UNIT	ECONOMICS		
LEVEL OF STUDIES	UNDERGRADUATE		
COURSE CODE	ΜΠ405	SEMESTER	5th
COURSE TITLE	ECONOMETRICS II		
INDEPENDENT TEACHING ACTIVITIES		WEEKLY TEACHING HOURS	CREDITS
if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits		3	7
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialized general knowledge, skills development</i>	GENERAL BACKGROUND		
PREREQUISITE COURSES:	NO		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	GREEK		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	YES		
COURSE WEBSITE (URL)	http://www.halkos.gr/el/content/89-oikonom%CE%B5%CF%84%CF%81%CE%B9%CE%B1-ii		

LEARNING OUTCOMES

Learning Outcomes
<i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i> <i>Consult Appendix A</i> <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> <i>Guidelines for writing Learning Outcomes</i>

The course has the following learning objectives:

- (a) To extend econometric analyses.
- (b) To continue presenting the fundamental econometric concepts.
- (c) To enable students to understand and deepen their knowledge of diagnostic tests and other advanced topics such as systems of simultaneous equations, stationarity and cointegration tests, models with a dummy variable as the dependent variable, and distributed-lag models.

On successful completion of the course the student will be able to:

- (1) Answer specialized econometric problems.
- (2) Specify more advanced models using dynamic analyses or systems of multiple equations.
- (3) Test the validity of economic theories.
- (4) Make forecasts.
- (5) Use appropriate econometric analysis software.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

<i>Search for, analysis and synthesis of data and information, with the use of the necessary technology</i> <i>Adapting to new situations</i> <i>Decision-making</i> <i>Working independently</i> <i>Team work</i> <i>Working in an international environment</i> <i>Working in an interdisciplinary environment</i> <i>Production of new research ideas</i>	<i>Project planning and management</i> <i>Respect for difference and multiculturalism</i> <i>Respect for the natural environment</i> <i>Showing social, professional and ethical responsibility and sensitivity to gender issues</i> <i>Criticism and self-criticism</i> <i>Production of free, creative and inductive thinking</i> <i>.....</i> <i>Others...</i> <i>.....</i>
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- Searching, analyzing and synthesizing data and information, using the necessary technologies
- Decision making
- Evaluating the validity of obtained results
- Working in an international environment
- Working in an interdisciplinary environment
- Generating new research ideas

SYLLABUS

Week 1 Model selection criteria (Akaike Information Criterion and Schwarz Bayesian Criterion). Criteria for choosing between linear and log-linear forms (Box–Cox, Bera–McAleer, McKinnon–White–Davidson).

Week 2 Tests for coefficient stability (Chow test, Hansen criterion, CUSUM, CUSUMSQ). LR, LM and Wald tests (likelihood-ratio, Lagrange multiplier, and Wald statistics).

Week 3 Autoregressive models with conditional heteroskedasticity: ARCH tests and GARCH models.

Week 4 Extensions of the linear model: nonlinear models and models with a dummy dependent variable (linear probability model, Logit, Probit).

Weeks 5–6 Distributed-lag models. Models with unlimited lags (Koyck, Solow). Models with finite distributed lags (Almon lag model).

Week 7 Empirical lagged models (partial adjustment model; adaptive expectations model).

Week 8 Systems of simultaneous equations (economic structure, reduced form, stochastic specification, types of equation systems). The simultaneous-equation econometric model and simultaneity error.

Week 9 Estimation methods for systems of simultaneous equations (indirect least squares; two-stage least squares).

Weeks 10–11 Main components of time series. Stationarity and cointegration tests (spurious regression, unit-root tests: Dickey–Fuller, augmented Dickey–Fuller, Phillips–Perron). Concept and testing of cointegration (Engle–Granger test, CRDW test; examples).

Weeks 12–13 Comprehensive review and synthesis of main theoretical and practical course concepts (primarily using EVIEWS; presentation of STATA). Possible future extensions of the course.

TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face to face		
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	• Use of the e-class electronic platform to upload (a) lecture notes, (b) tutorial exercises, (c) announcements. • Use of specialized statistical software (e.g., Excel Analysis ToolPak, MINITAB) to perform descriptive and inferential statistical analysis.		
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given</i>	Activity	Semester workload	
	Lectures	39	
	Seminars	15	
	Exam before final exam	2	
	Final exams	2	
	Study bibliography	70	
	Homeworks	40	
	Use of econometric software	42	
	Course total	210	

<i>as well as the hours of non-directed study according to the principles of the ECTS</i>	
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other.</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	Grading is by a final exam or an optional exemption assessment; participation and completion of exercises in tutorial sessions are also taken into account.

ΣΥΝΙΣΤΩΜΕΝΗ-ΒΙΒΛΙΟΓΡΑΦΙΑ

ΥΠΟΛΟΓΙΣΤΙΚΗ ΟΙΚΟΝΟΜΕΤΡΙΑ

Κωδικός Βιβλίου στον Εύδοξο: 94700714

Έκδοση: 1η έκδ./2020

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Διαθέτης (Εκδότης): ΕΚΔΟΣΕΙΣ ΔΙΣΙΓΜΑ ΙΚΕ