

COURSE OUTLINE

(1) GENERAL

SCHOOL	APPLIED ECONOMICS AND SOCIAL SCIENCES		
DEPARTMENT	AGRICULTURAL ECONOMICS & RURAL DEVELOPMENT		
STUDY LEVEL	Undergraduate		
COURSE CODE	306	SEMESTER	4 th
COURSE TITLE	SPECIAL TOPICS IN QUANTITATIVE ECONOMICS		
INDEPENDENT TEACHING ACTIVITIES <i>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</i>		WEEKLY TEACHING HOURS	CREDITS
		5	6
<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, specialised general knowledge, skills development</i>	Special background		
PREREQUISITE COURSES:			
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	NO		
COURSE WEBSITE (URL)			

(2) 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> <ul style="list-style-type: none"> • Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area • Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B • Guidelines for writing Learning Outcomes
<p>The course is an introduction to causal inference, specifically causal induction from observational data. The purpose of the course is to draw conclusions about whether and to what extent one variable X affects another variable Y, when we cannot or do not want to perform an experiment. Students, upon successful completion of the course, will be able to understand what constitutes a causal research question and how we can answer that research question using observational data and a typical set of tools likely to be used by someone engaged in by causal induction. Some of these tools are statistical, such as regression, while others are research designs that have proven useful for answering many research questions, such as estimating differences in differences.</p>

General Competences <i>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>	
<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>
Working independently Decision-making Criticism and self-criticism Production of free, creative and inductive thinking	

(3) SYLLABUS

1. Description of data 2. Description of Relationships 3. Causality 4. Identification 5. Causal Diagrams 6. Review of causal concepts 7. Fixed Effects 8. Difference-in-Differences 9. Regression Discontinuity Design 10. Instrumental Variables
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(4) 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>	All course material is available online through the e-course platform and grades are submitted through ClassWeb.	
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 as well as the hours of non-directed study according to the principles of the ECTS</i>	Activity	Semester workload
	Lectures,	65
	Directed study	60
	Course total	125 hours
STUDENT PERFORMANCE EVALUATION	Written final exam in Greek language :	

<p><i>Description of the evaluation procedure</i></p> <p><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></p> <p><i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i></p>	<p>- Problem Solving</p>
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(5) ATTACHED BIBLIOGRAPHY

Scientific papers (to be provided during lectures)
selected book chapters from:

R Programming for data science