College of Europe
Collège d'Europe

Brugge | Natolin

ECTS CARD

STUDY PROGRAMME	ACADEMIC YEAR	SEMESTER
ECO ECO-ELEA ECO-EPPA ECO-EEIB	**2020 - 2021**	**2nd**

COURSE TITLE

Applied Econometrics II

COURSE PROFESSOR	COURSE ASSISTANT
Stéphane VIGEANT	**Tony O'CONNOR**

NATURE OF COURSE (COMPULSORY, OPTIONAL)	LANGUAGE OF INSTRUCTION
Compulsory ECO **Optional ECO-ELEA ECO-EPPA ECO-EEIB**	**English**

ECTS CREDITS

4.5

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1. COURSE OBJECTIVE

The purpose of the course is to give to the student a practical working knowledge of the econometrics of evaluation, while basing it on the necessary theoretical foundations. The tools presented in the course leads directly to the analysis of economic policy. Such tools, mostly founded in microeconomic theory, are the central block of applied microeconometric works in various fields, including public policy analysis, industrial economics, labor economics, and regional economics, among others. The aim is to develop an appropriate modelling strategy. The practice of econometrics is at the center of the stage.

2. LEARNING OUTCOMES

At the end of this course, students should be able:

1. To understand the methodology of the econometric methods listed below and be able to apply it to data sets using Stata;
2. To correctly interpret and critically evaluate the empirical results of an econometric estimation;
3. To formulate a given economic question into an econometric problem and be able to evaluate and decide on the appropriate method to apply to a given dataset to obtain relevant elements to answer the question;
4. To evaluate the advantages and potential pitfalls of the applied methodology, and compare it with alternative methods.

The learning outcomes for this course tie in with the following learning outcomes for the European Economic Studies program:

1. Use economic theory to assess current problems and policies;
2. Learn how to acquire relevant information in related disciplines (law, political science);
3. Think innovatively and provide constructive analytical commentary as well as potential recommendations on the evolution of the EU and its possible future development;
4. Recognize the importance of empirical foundation for knowledge acquisition and evidence-based policies and use quantitative techniques and other empirical methods to evaluate theoretical knowledge;
5. Find, select, critically evaluate and use references, data and other sources of information within a short amount of time;
6. Be autonomous in their preparation and review of materials for the courses as well as in their completion of assignments bearing different requirements in terms of methodology, workload and evaluation of the final work;
7. Work together in groups to solve problems, share tasks, prepare assignments, go through case studies and make presentations.

3. COURSE CONTENTS

The topics covered in the course are the following:

1. Maximum likelihood estimation
2. Elements of limited dependent variable models
    a. Binary outcomes
    b. Introduction to multinomial models
3. Censored and truncated models
4. Selection models
5. Models of count data
6. Elements of panel data models for evaluation
7. Treatment evaluation
8. Difference in difference and regression discontinuity
9. (if time allows it) Clustering

4. TEACHING METHOD(S)

Lectures and compulsory assignments realized in groups. Groups (of two or three) must be formed at the start of the second lecture. The lectures provide the methods, which are then put in practice in assignments.

5. COURSE MATERIAL

Lecture notes

There are a couple of textbooks covering the topics of the course. However, textbook coverage is much more technical than the level of this course so consider them more as complement to the course. The references are :

Cameron A. C. and P. Trivedi Microeconometrcis: Methods and applications, Cambridge University Press, 2005.

Wooldridge, J.M., Econometric analysis of cross section and panel data, MIT press, 2002.

References will be added during the course when useful.

6. EVALUATION

First session
Assignments: 35% of the final mark. The assignments will be graded.

A written, open-book examination will take place during the first examination session: 65% of the final mark. Lecture notes provided by the instructor, personal notes of the student and assignments realized in the framework of the course are allowed.

Second session

The resit examination is written and counts for 100pc of the final grade.