



## STUDY PROGRAMME

ECO-ELEA

## ACADEMIC YEAR

2023 - 2024

## SEMESTER

2nd

## COURSE TITLE

QUANTITATIVE METHODS FOR REGULATION AND COMPETITION

## COURSE PROFESSOR

ALBERT BANAL-ESTANOL & BRECHT BOONE

## COURSE ASSISTANT

UYANGA LKHAGVAJAV

## NATURE OF COURSE (COMPULSORY, OPTIONAL)

COMPULSORY

## LANGUAGE OF INSTRUCTION

ENGLISH

## ECTS CREDITS

3

### 1. COURSE OBJECTIVE

This course provides an introduction to quantitative techniques currently employed by competition and regulatory agencies to aid the conduct of competition policy and regulation.

By the end of the course, you should be comfortable with the use of these techniques and be able to critically evaluate quantitative work carried out by others. This involves three elements: (i) practice in using techniques, (ii) understanding the limitations of the techniques, (iii) practice in applying the results to competition and regulatory situations.

### 2. LEARNING OUTCOMES

- To be able to search and analyse data from real world economics, in order to fully understand it.
- To be able to formulate relevant economic problems in competition and market regulation, and propose solutions to those problems, using empirical analysis and simulation.
- To learn to estimate simple oligopoly models and demand systems.
- To learn to use data to identify and quantify the effects of policies and regulations.
- To thoroughly read and critically evaluate research articles and identify essential contributions and the frontier of knowledge.
- To write economic reports for public and private organizations, and to present them in a clear and convincing manner.
- To be able to communicate conclusions, judgements and the grounds on which they have been reached to specialist and non-specialist audiences in a clear and unambiguous manner.



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

1. Use economic theory to assess current problems and policies;
2. Recognise the importance of empirical foundation for knowledge acquisition and evidence-based policies and use quantitative techniques and other empirical methods to evaluate theoretical knowledge;
3. Find, select, critically evaluate and use references, data and other sources of information within a short amount of time;
4. 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;
5. Use their knowledge of economics, legal principles and political science to analyse problems in law or political science.

### 3. COURSE CONTENTS

1. Introduction to the quantitative techniques in regulation
2. The building blocks approach and the cost of capital
3. Estimating production and cost functions
4. Benchmarking: linear programming (DEA) and econometric techniques (COLS, SFA)
5. Introduction to the quantitative techniques in competition
6. Market definition and tests of market power
7. Empirical demand models, diversion ratios and UPP
8. Merger simulation models

### 4. TEACHING METHOD(S)

There will be lecture sessions but, as practice is essential, you will be guided through this during the lab sessions. There might be one or more role play sessions where we can practice using the results of a quantitative analysis in an adversarial setting.

### 5. COURSE MATERIAL

Given the nature of the material, there is no suitable textbook. Instead students will be referred to a variety of sources, including journal articles, case studies, reports, and textbook chapters. A relevant reference is Peter Davis, Eliana Garces (2009) *Quantitative Techniques for Competition and Antitrust Analysis*, Princeton. The course labs have been prepared using STATA.

### 6. EVALUATION

The evaluation will be based on a closed-book written exam, three hours in length, which will take place during the second examination session.

The resit exam is written and counts for 100% of the final mark for the course.

The College of Europe reserves the right to change the delivery and assessment of the course in case of restrictions related to the Covid-19 pandemic. Any communication from the Department in this regard takes precedence over the information provided in this ECTS card.