


Teacher(s)	Maystadt Jean-François ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	The course starts by showing students how to use the basic tools of Econometrics with practical examples of the most up-to-date economic models. Students will then see, through the application of the various approaches to time series modelling, the problems involved in recognising apparently significant results which actually have no real content. A number of more advanced but essential tools will also be introduced. Learning to use econometric software is also an integral part of this course.
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>1 This course is a natural extension of the "Econometrics" course. The principal objective is to study in greater detail and extend training in fields of econometric modelling. Particular stress is put on problems specific to time series modelling, on the basis of methods taught in the "Econometrics" course.</p>
Evaluation methods	The assessment will be based on the submission of a written assignment and an oral assessment. The final mark is the arithmetic mean of the marks received for the written work and the oral evaluation. The oral evaluation will consist in measuring the achievement of learning outcomes both on the basis of the written work and on the basis of the course. Criteria used for the written assignment: - Capacity to use Stata (apply methods that go beyond standard OLS and methods covered during the course) - Capacity to understand the applied methods - Implementation of methods covered during the course - Originality - Motivation behind the research question - Ability to build an original dataset - Presentation and care given to the redaction of the assignment - Bonus point: Use of Latex Criteria used for the oral presentation: - Capacity to explain the written assignment - Ability to think critically - Ability to understand the methods applied in the written assignments but also covered during the lectures The participation of the students in the preparation of the weekly sessions as well as in the practical work will enable the students to prepare for the evaluation, via regular exercises carried out in class. These exercises will count for 5 percentage points of the oral evaluation (with one bonus point). Students who do not complete the exercises in class or who consider their mark insufficient, have the possibility of answering a substitution question on the course during the oral examination (for the same evaluation of 5 percentage points). Students who choose to keep their mark may be asked about the course but will not be required to answer this additional question. During the second session, the work and the presentation will be done on an individual basis but the evaluation criteria remain the same. The use of artificial intelligence during the evaluation for this course is governed by the rules mentioned in the faculty note on this subject and available on the faculty intranet site in the information for students.
Teaching methods	<p>The proposed economic questions give us an opportunity to introduce the students basic econometrics methods: Ordinary Least Squares, instrumental variable approach, panel data methods with a particular focus, on difference-in-difference methods of estimation.</p> <p>By the end of this course, the student will be in a position to:</p> <ul style="list-style-type: none"> • Understand standard econometric methods and its application to economic data • Interpret results from regression models and define their limits (identifying assumptions) • Understand the main intuition behind more advanced methods to draw causal inference (panel, difference-in-difference, instrumental variables, ...) • Perform hands-on applications using available statistical software
Content	<p>The course is a hands-on approach to econometric methods. After an introductory lecture on "causal inference", the course will be organised along 4 questions:</p> <ol style="list-style-type: none"> 1. Why are some countries rich, and others are poor? 2. Natural resources: Curse or blessing? 3. Is the introduction of a minimum wage detrimental to employment? 4. Shall we limit the minimum legal age for alcohol consumption? <p>Each thematic lecture will start by shortly introducing one of the above economic question and some available data to address this question. Starting from interactive discussions with the students, we will use each question to understand key identification challenges and learn how to apply appropriate econometric methods. The aim is not to give a definitive answer to these economic questions but to see how to approach methodologically. Through this process, the course will introduce the students to basic econometrics methods: Ordinary Least Squares, instrumental variable approach, panel data methods with a particular focus, on difference-in-difference methods of estimation.</p> <p>Each thematic lecture will end with a recap on the method used.</p>

Inline resources	Students will be asked to follow a few tutorials on the use of Stata on their own.
Bibliography	<p>Il n'y aura pas de manuel à proprement parler pour ce cours. Des papiers académiques seront donnés pour chaque question économique. Cependant, l'introduction aux méthodes économétriques s'appuiera sur :</p> <ul style="list-style-type: none"> • Angrist and Pischke (2015) Mastering Metrics. • Angrist and Pischke (2009) Harmless Econometrics. • Wooldridge. Introductory Econometrics
Other infos	It is highly desirable (although not required) to have taken an econometrics course.
Faculty or entity in charge	ESPO

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Additionnal module in Economics	APPECON	5		
Bachelor in Philosophy, Politics and Economics	PPE1BA	5		