


Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

5 credits	30.0 h	Q2
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Teacher(s)	Van Belleghem Sébastien ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<p>The course must cover the basic most important topics of econometric theory at an advanced level. These themes concern econometric model formulation, estimation and testing. Teaching is at an advanced level. Proofs of important results are covered, though not systematically. Applications are also used so that students learn how to carry applications in their own research.</p> <p>Contents</p> <ul style="list-style-type: none"> • Linear regression : exact finite sample theory of ordinary and generalized least squares • Large-sample theory: convergence concepts, stochastic processes (stationarity and ergodicity, IID and white noise, martingales, martingale difference sequences) and limit theorems for IID and MDS). Application to large sample theory of least-squares estimation. • GMM and the method of instrumental variables • The method of maximum likelihood: (estimation and testing) and its application to linear regression and non-linear regression models. • Empirical applications. Use of an econometric and simulation/computational software.
Aims	<p>1 The purpose is that students acquire the basic tools of econometric research which are of general use in more specialized fields of research and which are covered in subsequent courses (Microeconometrics and Econometrics of Time-Series). An example of such a tool is the method of estimation by maximum likelihood.</p> <p>-----</p> <p><i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i></p>
Evaluation methods	<p>Due to the COVID-19 crisis, the information in this section is particularly likely to change.</p> <p>Oral or written exam. A part of the final result is reserved for the evaluation of the exercises assigned during the term.</p>
Bibliography	
Other infos	Support: A textbook like Hayashi Econometrics
Faculty or entity in charge	ECON

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Economics: General	ECON2M	5		
Master [120] in Economics: Econometrics	ETRI2M	5		