UCLouvain

lecon2601

2017

Advanced Econometrics II - Time Series Econometrics

5 crédits	30.0 h	Q2

Enseignants	Gao Zhengyuan ;
Langue d'enseignement	Anglais
Lieu du cours	Louvain-la-Neuve
Thèmes abordés	The course must cover the important and essential themes of the econometrics of time series analysis and their application in some fields of economics, like macroeconomics and finance. The basic concepts of stationarity and ergodicity are taught in the prerequisite course. The main themes for this course are those of linear time series models (autoregressive and moving average models), unit roots and cointegration. Both univariate and multivariate models must be taught. For non linear time series models, a selection of topics has to be done mainly among ARCH models, Makov-switching models, and state-space models. In all topics, the themes of model building, evaluation and prediction are included.
Acquis d'apprentissage	1 The purpose is to train the students in the tools and models useful for the econometric analysis of economic time-series. Students will learn to understand in depth and apply correctly the techniques. The course prepares to research in the field of time-series analysis and its applications. - - - - *La contribution de cette UE au développement et à la maîtrise des compétences et acquis du (des) programme(s) est accessible à la fin de cette fiche, dans la partie « Programmes/formations proposant cette unité d'enseignement (UE) ».*
Contenu	Contents Autoregressive and move average models (univariate case) Regression analysis for time-series : the stationary case and the non-stationary case (trending regressors, deter-ministic and stochastic trends). Vector autoregressive and moving average models. Cointegration analysis. Non-linear time-series models (ARCH, Markov-Switching) Macro-econometric and financial applications. Use of econometric software for applications and computa-tions/ simulations. Methods Lectures, take-home exercises, readings of exemplary papers, empirical exercises using econometric software
Autres infos	Advanced Econometrics I Written or oral exam. A part of the final result is reserved for the evaluation of the exercises as-signed during the term. A textbook like Hayashi Econometrics or Hamilton's Time Series Analysis
Faculté ou entité en charge:	ECON

Programmes / formations proposant cette unité d'enseignement (UE)

Intitulé du programme	Sigle	Crédits	Prérequis	Acquis d'apprentissage
Master [120] en statistiques, orientation générale	STAT2M	5		
Master [120] en sciences économiques, orientation économétrie	ETRI2M	5		
Master [120] en sciences économiques, orientation générale	ECON2M	5		