UCLouvain

lecon2601

2026

Advanced Econometrics II - Time Series Econometrics

5.00 crédits	30.0 h	Q2

Enseignants	Van Bellegem Sébastien ;
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	**A la fin de cette unité d'enseignement, l'étudiant est capable de :** 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.
Modes d'évaluation des acquis des étudiants	Based on a reading, the student will present a chapter orally during the lecture. Second session exam : oral exam based on a reading of a chapter book.
Méthodes d'enseignement	Weekly lecture.
Contenu	1. Constructive analysis 2. Conditional expectation in Banach space 3. Dynamical modelling
Ressources en ligne	Moodle UCL (> https://moodleucl.uclouvain.be/).
Bibliographie	Errett Bishop (1967). *Foundations of Constructive Analysis* . New York: McGraw-Hill. Jacques Neveu (1975). *Discrete-Parameter Martingales* . Amsterdam: North-Holland Publishing Company.
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 sciences économiques, orientation économétrie	ETRI2M	5		🔍
Master [60] en sciences économiques, orientation générale	ECON2M1	5		🔍
Master [120] en statistique, orientation générale	STAT2M	5		🔍
Master [120] en sciences économiques, orientation générale	ECON2M	5		🔍