UCLouvain

lstat2420

2021

Non- and semi- parametric econometrics

5.00 credits	30.0 h	Q2

This biannual learning unit is not being organized in 2021-2022 !

Teacher(s)	Hafner Christian ;
Language :	English
Place of the course	Louvain-la-Neuve
Learning outcomes	
Content	The objective of this lecture is to provide an introduction to non- and semiparametric estimation methods that are often used in econometrics. For the classical kernel density and regression estimator, the asymptotic theory will be developed in some detail. For time series regression and semiparametric models, an emphasis will be given on applications through various examples. Beyond understanding the properties, students are expected to learn how to implement the methods. 1. Nonparametric estimation a. Kernel density estimator (properties, asymptotics, higher order kernels, density derivatives, multivariate densities, bandwidth selection) b. Nonparametric regression (local polynomial estimator, properties, asymptotics; time series) 2. Semiparametric estimation a. Semiparametric eciency bounds b. Linear regression with unknown error density c. Partially linear model d. Single index model e. Semiparametric models for time series f. Semiparametric models for panel data
Bibliography	• Li, Q. and S. Racine (2007), Nonparametric Econometrics, Princeton University Press. • Pagan, A. and A. Ullah (1999), Nonparametric Econometrics, Cambridge University Press. • Ruppert, D., M.P. Wand and R.J. Carroll (2003), Semiparametric Regression, Cambridge Series in Statistical and Probabilistic Mathematics, Cambridge University Press. • Yatchew, A. (2003), Semiparametric regression for the applied econometrician, Cambridge University Press.
Faculty or entity in charge	LSBA

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Statistics: General	STAT2M	5		