UCL Université catholique de Louvain

LSTAT2150

2015-2016

Non parametric statistics: smoothings methods

4.0 credits	15.0 h + 5.0 h	1q

Teacher(s) :	von Sachs Rainer ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Main themes The topics treated during this course are : 1. Nonparametric estimation of a distribution function 2. Nonparametric estimation of a density function : the kernel method 3. Nonparametric estimation of a regression function : - kernel estimation - local polynomial estimation - spline estimation The material will essentially be treated from an applied point of view of methodology. The student will study software applications of the proposed methods.
Aims :	Second course of general education in nonparametric statistics, which mainly focuses on smoothing methods. *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".*
Other infos :	Prerequisites Basic knowledge about probability and statistics: descriptive statistics, calculating probabilities, distribution function, probability density, means, variances (conditionally or not), linear regression. It is advisable (but not necessary) to follow the course STAT2140 before. References Fan, J. and Gijbels, I. (1996). Local polynomial modelling and its applications. Chapman & Hall, New York. Green, P.J. and Silverman, B.W. (2000). Nonparametric regression and generalized linear models. Chapman & Hall, New York. Härdle, W. (1990): Applied Nonparametric Regression. Cambridge University Press, Cambridge. Hart, J.D. (1997). Nonparametric smoothing and lack-of-fit tests. Springer, New York. Loader, C. (1999). Local regression and likelihood. Springer, New York. Silverman, B.W. (1986) : Density Estimation for Statistics and Data Analysis. Chapman and Hall, London. Simonoff, J.S. (1996). Smoothing methods in Statistics. Springer.
Faculty or entity in charge:	LSBA

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

Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
	STAT9CE	4	-	
Master [120] in Statistics: Biostatistics	BSTA2M	4	-	
Master [120] in Statistics: General	STAT2M	4	-	
Master [120] in Economics: General	ECON2M	5	-	
	STAT2FC	4	-	