






5.00 credits

30.0 h + 30.0 h

Q1

Teacher(s)	Hafner Christian ;
Language :	French
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	The evaluation is based on a personal project on a realistic dataset, and an oral exam.
Teaching methods	lectures on theory and illustrations on computers
Content	<ol style="list-style-type: none"> 1. Spatial data and representation in R 2. Spatial point processes 3. Classical linear regression 4. Spatial linear regression 5. Interpolation and spatial prediction 6. Spatio-temporal data 7. Discrete choice models
Inline resources	Every note, chunk of R code, or dataset used in the course is available on the moodle site associated with this course. MOOC "Introduction à l'économétrie" sur edx (ouvert en self pace) : https://learning.edx.org/course/coursev1: LouvainX+Louv14x+3T2024/home Vidéos, exercices, études de cas, implémentation des méthodes en R
Bibliography	<ul style="list-style-type: none"> • L Anselin, Spatial Econometrics, Kluwer, 1988. • R Bivand, E Pebesma and V Gomez-Rubio, Applied Spatial Data Analysis with R, Springer, New York, 2nd edition 2013. • Crawley, Statistics : An Introduction Using R, Wiley, 2005. Web site: http://www.imperial.ac.uk/bio/research/crawley/statistics • Wikle, C.K., Zammit-Mangion, A. and Cressie, N. (2019), Spatio-Temporal Statistics with R, CRC Press. • J LeSage and RK Pace, Introduction to Spatial Econometrics, Chapman & Hall/CRC, Boca Raton, Florida, 2009. • O Schabenberger and C Gotway, Statistical Methods for Spatial Data Analysis, Chapman & Hall, 2005.
Other infos	Prerequisite GEO1341 Modélisation statistique en géographie (or similar).
Faculty or entity in charge	GEOG

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Geography : Climatology	CLIM2M	5		
Master [60] in Geography : General	GEOG2M1	5		
Advanced Master in Quantitative Methods in the Social Sciences	LMQS2MC	5		
Interdisciplinary Advanced Master in Science and Management of the Environment and Sustainable Development	ENVI2MC	5		
Master [120] in Statistics: General	STAT2M	5		
Master [120] in Geography : General	GEOG2M	5		