






3.00 credits

22.5 h + 15.0 h

Q1

Teacher(s)	Bogaert Patrick ;Hanert Emmanuel ;
Language :	French
Place of the course	Louvain-la-Neuve
Prerequisites	This cours requires the LBIR1212 and LBIR 1315 courses as prerequisite
Main themes	Notions of spatial/temporal dependency and its effect on statistical estimation. Quantification and modelling of dependencies through space and time. Random fields theory. Prediction and simulation of correlated data. Mapping and forecasting methods.
Learning outcomes	
Evaluation methods	The examination takes place in two parts : (1) written examination (about an hour); (2) oral examination with a defense of the project completed by the group of students (about half an hour)
Teaching methods	Regular course and supervised practical exercises. Practical exercises will take place in a computer room using the Matlab or R software. Students will work in groups and will process a specific spatial data set. This personal work will be part of a printed report that must be defended during the examination.
Content	This course will complete the basic notions already presented during the courses LBIR 1212 - Probability and Statistics (I) and LBIR 1315 - Probability and Statistics (II). The student will be able to analyze data that are correlated through space and time, as frequently encountered in the agro-environmental context. The course will emphasize the link between the general theory and the practical specificities of environmental data. It should allow the student to model such kind of processes and to use them in a mapping or forecasting context.
Inline resources	Moodle
Other infos	This course can be taught in English
Faculty or entity in charge	AGRO

<b>Programmes containing this learning unit (UE)</b>				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Environmental Bioengineering	<a href="#">BIRE2M</a>	3		
Master [120] in Statistics: Biostatistics	<a href="#">BSTA2M</a>	3		
Master [120] in Biology of Organisms and Ecology	<a href="#">BOE2M</a>	3		
Master [120] in Forests and Natural Areas Engineering	<a href="#">BIRF2M</a>	3		
Certificat d'université : Statistique et sciences des données (15/30 crédits)	<a href="#">STAT2FC</a>	3		
Master [120] in Agriculture and Bio-industries	<a href="#">SAIV2M</a>	3		