UCLouvain

lstat2100

2021

Discrete data analysis.

5.00 credits	30.0 h + 7.5 h	Q2

Teacher(s)	El Ghouch Anouar ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	- Multinomial Distribution : marginal and conditional distributions and asymptotic properties - Two ways Contingency Tables : Independance and Homogeneity, measures of association and particular tests (Fisher, Mac Nemar, etc.). - Multiple ways Contingency Tables : Mutual, Partial and Conditional Independencies. - Log-linear Models. - Conditional Models - Generalized Linear Models - Logit and Probit Models - Multinomial Discriminant Analysis - Selection of explanatory variables
Learning outcomes	**At the end of this learning unit, the student is able to :** 1 The student will be able to use the basic techniques of Discrete Data Analysis and to apply these to real data using statistical softwares
Evaluation methods	Each student is provided a data set to be analyzed by the taught techniques. This analysis is the object of a report orally presented by the student to the Professors. During this presentation, the Professors may question the student on the matter of the course.
Content	Content - Multinomial Distribution : marginal and conditional distributions and asymptotic properties - Two ways Contingency Tables : Independance and Homogeneity, measures of association and particular tests (Fisher, Mac Nemar, etc.). - Multiple ways Contingency Tables : Mutual, Partial and Conditional Independencies. - Log-linear Models. - Conditional Models - Generalized Linear Models - Logit and Probit Models - Multinomial Discriminant Analysis - Selection of explanatory variables Methods The course is concentrated on the first ten weeks. The following 4 weeks are devoted to the realization by each student of an empirical study of suitable data.
Other infos	Prerequisites : Elementary courses in Probability and Statistics
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		
Master [120] in Statistics: Biostatistics	BSTA2M	5		
Master [120] in Economics: General	ECON2M	5		
Certificat d'université : Statistique et sciences des données (15/30 crédits)	STAT2FC	5		
Master [120] in Mathematical Engineering	MAP2M	5		
Master [120] in Data Science : Statistic	DATS2M	5		