UCLouvain

lstat2014

2022

Elements of probability and mathematical statistics

5.00 credits	22.5 h + 22.5 h	Q1

Teacher(s)	Pircalabelu Eugen ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	The course will focus on presenting key probabilistic / inferential concepts, to help students level up for more advanced courses.
Learning outcomes	**At the end of this learning unit, the student is able to :** use the appropriate probabilistic model and determine quantities of interest based on it. understand the properties of different probability distributions and use the "iid" (independent and identically distributed) framework to construct statistical estimators for unknown quantities of the population. assess the quality of such estimators and supplement them with inference tools such as confidence intervals. perform hypothesis testing and understand statistical errors associated with statistical decisions.
Bibliography	Wackerly, D.D., Mendenhall, W. et Scheaffer, R.L. (2007). Mathematical Statistics with Applications, 7th Ed., International student edition, Brooks-Cole. Rice J.A. (2007). Mathematical Statistics and Data Analysis 3rd Ed., Duxbury Press. Droesbeke, J.-J. (1997). Eléments de Statistique. Editions de l'Université de Bruxelles & Editions Ellipses.
Faculty or entity in charge	LSBA

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Data Science : Statistic	DATS2M	5		
Minor in Statistics, Actuarial Sciences and Data Sciences	MINSTAT	5		
Certificat d'université : Statistique et science des données (15/30 crédits)	STAT2FC	5		