UCLouvain

lstat2012

2020

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

3 credits	15.0 h + 15.0 h	Q1

Teacher(s)	Pircalabelu Eugen ;
Language :	French
Place of the course	Louvain-la-Neuve
Aims	*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".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Written exam of 3 hours, closed book with the possibility of using a formulaire and a pocket calculator. The exam consist of theoretical questions and exercises to be solved and a list of tables will be provided. A 'test dispensatoire' (non-compulsory) will be organized in the beginning of the class and an evaluation (compulsory) before the regular exam session will be organized at the end of the class. These two forms of evaluation have an equivalent complexity as the exam in the regular exam session and are organized in a similar fashion. To be allowed to take part in the examination the student has to submit 3 compulsory homeworks (short, 1-2 pages maximum per homework). The homeworks are not graded as they are not part of the evaluation. Submission of less than 3 homework results in failure of the course!
Teaching methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** The class consists of lectures (15h) and exercises sessions (15h). Teaching language: French.
Content	The class is focused on the presentation of key probabilistic concepts such as: • Events • Marginal and conditional probability • Bayes Theorem • Discrete and continuous random variables • Distribution and density functions • Classical distributional models • Moments • Random vectors • Limit theorems
Inline resources	Moodle website of the class: LSTAT2012 - Probabilités: Concepts de base pour l'analyse statistique https://moodleucl.uclouvain.be/course/view.php?id=12678.
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. • Khuri, A (1993). Advanced calculus with applications in statistics, Wiley, New York.
Faculty or entity in charge	LSBA

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Data Science : Statistic	DATS2M	3		
Certificat d'université : Statistique et sciences des données (15/30 crédits)	STAT2FC	3		
Minor in Statistics, Actuarial Sciences and Data Sciences	MINSTAT	3		