lmat2470

2019

UCLouvain

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

5 credits	30.0 h	Q2

Teacher(s)	Hainaut Donatien ;
Language :	French
Place of the course	Louvain-la-Neuve
Main themes	Discrete time Martingales (sub-martingales and super-martingales), stationary processes, exchangeable processes, conditionally i.i.d. processes and Markov processes.
Aims	1 Presentation of the main discrete time stochastic processes with an introduction to their statistical analysis. - - - - *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.** Each student receives 5 exercices to solve. He writes up the solutions and orally presents them to the professor. who may ask theoretical questions related to the subject of the proposed exercices.
Bibliography	• NEVEU, J., Martingales à temps discret, Masson, 1972. BREIMAN, L., Probability, Addison-Wesley, 1968. • CHOW, Y.S. and M. TEICHER, Probability Theory: Independence, Interchangeability, Martingales, Springer-Verlag, 1987. • CHUNG K.L., A Course in Probability Theory. Harcourt, Brace & World Inc., 1968. • KARLIN S. and H.M. TAYLOR, A First Course in Stochastic Processes, Academic Press, 1975.
Other infos	Prerequisite : The courses MAT1322 Théorie de la mesure and MAT1371 Probabilités are an essential prerequisite.
Faculty or entity in charge	MATH

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Mathematics	MATH2M	5		🔍
Master [120] in Actuarial Science	ACTU2M	5		🔍
Master [60] in Physics	PHYS2M1	5		🔍
Master [120] in Statistic: General	STAT2M	5		🔍
Master [120] in Physics	PHYS2M	5		🔍