UCLouvain



Advanced mathematics and foundations of econometrics

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).

30.0 h + 15.0 h

5 credits

Q2

Teacher(s)	Lefèvre Françoise ;				
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. Session 1 : Control in two parts				
	Part I : continuous assessment (/14 points)				
	 mean of 5 notes obtained during the 5 latest courses Part II : case study, group work (/6 points), work taken into account only if the average test score is # 7/20. 				
	Session 2 : Individual written exam (with non-annotated form and statistical tables and a simple pocket calculator -non graphical and without full alphanumeric keyboard).				
	In the event of a change in health conditions towards a code orange or red, the evaluation can be organized remotely via a computer software provided to teachers and students by the university institution. The technical conditions of this evaluation related to the software will be specified to you at the moment the state authorities will have decided the sanitary conditions for the university institutions in case of evolution.				
Teaching methods	Due to the COVID-19 crisis, the information in this section is particularly likely to change.				
	Lectures Case study				
	• Exercices by groups				
	Teaching is organized on-site, but could be remotely in the event of changes in health conditions.				
Content	Contents :				
	Modelisation in management				
	 Simple linear regression by ordinary least squares (OLS) : estimation and inference Multiple linear regression (MLR) by OLS : estimation and inference 				
	MLR with qualitative information				
	 Specification, selection, stability and prevision in MLR The normality assumption of the MLR model 				
	Heteroscedasticity				
	Multicolinearity.				
Inline resources	Available on Moodle				
Bibliography	Supports de prise de notes (transparents) et forums sur la plateforme Moodle (slides and forums on the platform (Moodle).				
	Ouvrages de références (à titre d'exemple) :				
	 WOOLDRIDGE, J. (2013). Introductory Econometrics: A Modern Approach, 3th ed. South Western College Publishing., traduction française (2018) Introduction à l'économétrie : une approche moderne. De Boeck Supérieur. GREENE W.H. (2002). Econometric Analysis, Prentice Hall. 				
	 JOHNSTON J. & DINARDO J. (1999). Méthodes Econométriques, Economica, traduction de JOHNSTON J. & DINARDO J. (1997). Econometric Methods, 2th ed. Mc GrawHill. 				
Faculty or entity in	ESPO				
charge					

Force majeure

Teaching methods	 Lectures. Case study. Exercices. Given the health situation, teaching wille be done in synchronous distance mode this year.
Evaluation methods	 Session 1 : Control in two parts Part I : continuous assessment (/14 points) average of 3 notes (i.e. 3 tests on Moodle during the course sessions of 01/03, 08/03 and 10/03). Part II : case study, group work (/6 points), work taken into account only if the average test score is higher than 7/20. Session 2 : Individual written exam (with non-annotated form and statistical tables and a simple pocket calculator -non graphical and without full alphanumeric keyboard). In the event of a change in health conditions towards a code orange or red, the evaluation of Session 2 can be organized remotely via a computer software provided to teachers and students by the university institution. The technical conditions of this evaluation related to the software will be specified to you at the moment the state authorities will have decided the sanitary conditions for the university institutions in case of evolution.

Programmes containing this learning unit (UE)							
Program title	Acronym	Credits	Prerequisite	Aims			
Master [120] in Law [Double Degree Law-Management: for Bachelors in Law]	DROI2M	5		ھ			