UCL Université catholique de Louvain

LECGE1224

2016-2017

Economics and Management Statistics

5.0 credits	30.0 h + 15.0 h	2q

Teacher(s) :	Heuchenne Cédric ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes :	Part 1: Basic methods of statistical analysis. After an introduction to statistical models (population and sampling models), students are shown how statistical sampling distributions form the basis for inferencing. These properties make it possible to check the precision of specific estimators, to construct confidence intervals and to check the risks of error in a hypothesis testing procedure. Part 2: Application to some standard problems. In this part, the basic methods taught in Part 1 are adapted to analyzing useful application issues in Economics and Management: Variance analysis (comparison of several averages); inter-variable relation modelling (linear models); Studies of categorical variables including an inter-variable independence test. Students will also be introduced, through simple examples, to the maximum likelihood estimation method, which is particularly useful in the more complex models analysed in later Econometrics courses. We consider finally the problem of poor specification of the model and the case a non-linear regression.
Aims :	The aim of this course is to introduce the types of reasoning and basic methods used in statistical analysis, and examine how they are used to solve simple statistical problems in the field of Economics and Management. This course also aims to teach the core subject-matter developed in the Statistics and Econometrics courses which students will take later in their degree course. By the end of the course students should be able to understand basic mechanisms of statistical inferencing and provide practical solutions to standard problems of estimation, confidence interval construction and hypothesis-testing on averages, variances and proportions. They should also be able to model inter-variable relations using simple linear regression models, with a basic introduction to multivariate aspects. *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".*
Content :	Content : Statistical model and sampling distribution, point and interval estimation, hypothesis testing, linear model (including matrix rating), Methods of Estimation including Maximum likelihood, Properties estimators, Inference in the simple regression, non linear regression Method: The course comprises: - lectures (the teacher introduces the concepts through a particular concrete application and abstracts from that), - practical exercise sessions (the teacher gives students applications/problems and suggests ways of sol-ving them). Active student participation through reading and independent problem solving
Other infos :	Statistics I or equivalent Course materials : Thomas, R.L.: Modern Econometrics, Pearson Education Ltd., 1997
Faculty or entity in charge:	ESPO

Programmes / formations proposant cette unité d'enseignement (UE)				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Minor in Statistics	LSTAT100I	5	-	
Minor in Economics	LECON100I	5	-	
Minor in Management (ESPO students)	LGESB100I	5	-	
Bachelor in Economics and Management	ECGE1BA	5	LECGE1114E **or** LECGE1114K	