UCLouvain

lpsys2166

2023

Advanced workshops of analysis methods - Methods of structural equation

2.00 credits	15.0 h	Q2

Teacher(s)	Nguyen Nathan (compensates Stinglhamber Florence) ;Stinglhamber Florence ;
Language :	French
Place of the course	Louvain-la-Neuve
Learning outcomes	
Evaluation methods	The evaluation of the course takes place during one of the workshops through the realization of a concrete data analysis exercise (no exam). Participation in the workshops (face-to-face, not distance learning) is therefore a prerequisite for students wishing to take this course.
Teaching methods	These are small group workshops. The lectures are accompanied by concrete exercises using a structural equation modeling software.
Content	Structural equation modeling, which can be used in various fields of the humanities and social sciences, has a wider scope of application than traditional regression models. **First**, they aim to estimate the relationships between so-called "latent" or unobserved variables. A latent variable is a concept for which no direct measurements are available. **Then**, they allow simultaneous examination of the theoretically-based effects of several predictors (or independent variables) on several variables to be predicted (or dependent variables). They thus offer their users the opportunity to approach real and complex situations. **In addition**, structural equation modeling has the undeniable advantage of directly taking into account in the statistical estimates the errors inherent in any measurement process, called "measurement errors". **Finally**, structural equation modeling also offers the possibility of a global evaluation of the research models studied. Thus, like traditional statistical methods, they allow an examination of the significance of the estimated relationships but they also give an indication of the degree of fit between the theoretical model being tested and the data collected. The course will address the main anlyses that can be done through these methods, namely: 1. Confirmatory factor analyses: to test the measurement model, the reliability and validity of the constructs. 2. Path analyses: allowing regressions to be made between several observed variables. 3. Hybrid models: allowing regressions between several latent variables, each measured by several indicators, taking into account the underlying measurement model.
Faculty or entity in charge	EPSY

Programmes containing this learning unit (UE)

Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Psychology	PSY2M	2		🔍
Master [120] in Education (shift schedule)	FOPA2M	2		🔍