

## **« Multilevel analysis »**

**4th and 12th October 2012**

**Course deliverer :**

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Multilevel analysis has become the standard technique to analyze clustered data such data collected from groups or repeated measures. The goal of the course is to provide a gentle, applied introduction to basic multilevel modeling, and enable participants to do basic analyses on their own data.

Day 1: In a first block, the course will introduce into the general logic of multilevel modeling, elaborate its strengths and advantages, and discuss data characteristics necessary for multilevel analysis. A second block will introduce to important concepts in multilevel modeling and the different components of multilevel models. Furthermore, denotation and reporting conventions will be explained based on examples. A third block will deal with data preparation, transformation and the technical setup of a multilevel model. It will be explained how important information types can be retrieved from the most basic types of multilevel models, and how such data can be interpreted.

Day 2: After recapitulating important elements, a first block will introduce some important models types; exemplify how they are implemented, and how results are interpreted and graphically displayed. This will include basic multilevel regression models involving different types of predictors, and testing moderators. The second block on day 2 will introduce longitudinal applications (change and growth modeling). In a third block, participants will have the opportunity to apply such models to their own data or sample data. Other variants and extensions of multilevel models, such as analyzing discrete outcomes, dyadic models or measurement models can be discussed according to the needs of participants.

Software: SPSS and HLM will be used in the course. Selected examples will be presented using MLwiN. Student Versions and 15-days (!) trial versions of HLM are available at [www.ssicentral.com](http://www.ssicentral.com).