



Berlin School of Public Health | BSPH

## Lecturer

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The BSPH Summer School

### „Multilevel Analysis“

is a training course offered by the  
Berlin School of Public Health,  
Charité - Universitätsmedizin Berlin  
Prof. Dr. Jacqueline Müller-Nordhorn  
Department of Public Health | Epidemiology

## Venue

Charité - Universitätsmedizin Berlin  
Campus Mitte (CCM)  
Charitéplatz 1 | 10117 Berlin

## Dates

Monday, July 23 through Friday, July 27, 2012  
9:00-17:00, Friday early dismissal at 13:00

Language	English
ECTS	3
Course fees	360 € for students 450 € other participants

## Registration Information

Ms. Tanja Te Gude, Student Services  
Tel. (030) 450 570 812  
Email [tanja.te-gude@charite.de](mailto:tanja.te-gude@charite.de)  
The number of participants is limited to 20.  
Payment of the course fee ensures participation.

Further information about BSPH: <http://bspb.charite.de>

# Multilevel Analysis

A Course in Multilevel Modelling for  
Public Health and Health Services Research

Summerschool | 23<sup>rd</sup> - 27<sup>th</sup> July, 2012

Design: Christine Voigts, Fotos: Wiebke Peitz, Zentrale Mediendienstleistungen, Charité - Universitätsmedizin Berlin



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Beteiligte Institutionen

## Course Outline

Public Health and health services research increasingly uses a statistical technique called multilevel modelling or multilevel analysis (MLA). Pioneering development of MLA methodology has been in education, where researchers have been interested in studies examining how student outcomes (such as examination scores) are related to both the characteristics of the students themselves and those of the schools. In this course we will clarify what MLA is about and why it is important to take both shared contexts and individual characteristics into account when doing public health and health services research. It is important for researchers in these fields to have at least a basic understanding of this technique so as to be able to judge research that uses it, and of course to be able to apply it themselves. The course provides

## Audience

Public Health professionals, epidemiologists, researchers and students (PhD, MSc and MPH). The course requires an understanding of basic statistical analysis such as multiple linear regression, logistic regression and analysis of variance. The computer classes will use MLwiN, a specialized multilevel modeling package. No previous knowledge of MLwiN will be assumed.

## Course Objectives

Public Health and health services research increasingly uses a statistical technique called multilevel modelling or multilevel analysis (MLA). Pioneering development of MLA methodology has been in education, where researchers have been interested in studies examining how student outcomes (such as examination scores) are related to both the characteristics of the students themselves and those of the schools. In this course we will clarify what MLA is about and why it is important to take both shared contexts and individual characteristics into account when doing public health and health services research. It is important for researchers in these fields to have at least a basic understanding of this technique so as to be able to judge research that uses it, and of course to be able to apply it themselves. The course provides

- Theoretical and methodological introduction to multilevel analysis (MLA)
- Theoretical introduction to macro-micro relationships in health services research
- Graphs, equations and multilevel modeling
- Apportioning variation in multilevel models
- Context and composition in multilevel models

## Learning Objectives

- To gain an understanding of the relevance of multilevel modeling for public health and health services research
- To gain basic insight into the theoretical backgrounds of relationships between macro level contexts and individual level behavior
- To gain an understanding of the methodological and basic statistical backgrounds of multilevel modeling
- To learn to work with the multilevel modeling software MLwiN.

## Teaching methods

The course consists of lectures, computer classes, individual consultation and two assignments.

Time will be provided every day for those participants who wish to begin analyzing their own data. Data for this purpose should be in one of the following formats: SPSS, Stata, Minitab, Excel or ASCII (either fixed format or space delimited). Since the time provided for this purpose is limited it is probably better to bring a subset of a very large data set.