

PhD Program Public Health

Course Title:

Multilevel Modelling: Analysis of Clustered Data

Description

Real data are often clustered such as repeated measurements on the same subject or measurements in grouped subjects (e.g. family or school studies). Failure to allow for clustering results in too small standard errors and subsequently produces false-positive findings. The aim of the course is to provide participants with an understanding of the basic concepts and general techniques in the analysis of clustered data. Valid analysis methods appropriate for clustered data will be introduced.

The course software will be Stata. Commands in other statistical packages (R, SAS, SPSS) will be described.

Main concepts to be covered include: clustering, random intercept, random slope, linear and logistic random-effects models (multilevel models, mixed models, hierarchical models), robust standard errors, generalized estimating equations (GEE), modelling strategy, model diagnostics.

Objectives

By the end of the course participants will be able to define the appropriate analysis method for a clustered data set. Participants will be able to perform and evaluate own analyses of clustered data.

Dates

2.-4. April 2008

Eligibility

The course is aimed at clinicians, researchers, public health specialists and other health care professionals who want to perform analyses of data with clustered structures. This is an advanced statistical course. Participants should know the principals of linear and logistic regression modelling. A practical experience with linear regression analysis is required.

Course structure

This is a statistical methods course. We will follow a non-mathematical approach and focus on the practical application of the techniques on datasets from epidemiology and prevention research. The course consists of interactive lectures and computer practicals. The course room will be equipped with computers. It is also possible to bring the own laptop to the course (Stata 9 has to be installed.) We will conclude with a question and answer session and an exam.

Student assessment

Exam

Credits

1 ECTS

Facilitator

Martin Röösl, PhD; Gisela Michel, PhD; Simon Wandel, MSc, Institute of Social and Preventive Medicine, University of Bern

Location

Fachbereichsbibliothek Bühlplatz, Baltzerstr. 4, Bern

Course fee

300.--

Registration

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PhD Program Direction:

Academic lead: Prof. Charlotte Braun-Fahrländer
Program coordination: Dr. Sonja Merten
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PhD Program Public Health

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DEADLINE

PLEASE REGISTER BY FRIDAY 29 February 2008

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