PhD Program Public Health

SSPH+ SWISS SCHOOL OF PUBLIC HEALTH +

Multilevel Modeling: 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 erroneous standard errors and confidence intervals. The aim of the course is to provide participants with an under-standing 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. 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	**Mon 17 – Wed 19 October 2016**
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 and practical experience with linear regression analysis is required. Basic knowledge of Stata is needed.
Course Structure	This is a statistical methods course. We will follow a nonmathematical 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. You have to bring the own laptop to the course (Stata has to be installed.) We will conclude with a question and answer session and an exam.
Assessment	Written exam

SSPH+ PhD Program in Public Health:

Program Coordination	Ann Walser
Academic Lead	Prof. Matthias Egger Prof. Thomas Abel Dr. Nicole Bender

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PhD Program Public Health

Credits	**1 ECTS** Preparation Work: 4 h, Contact: 24 h, Follow Up: 2 h 1 ECTS corresponds to appr. 30 hours workload
Facilitators	**Prof. Martin Röösli** (Head of the Environmental Exposures and Health Unit, Swiss Tropical and Public Health Institute, CH-Basel) **Dr. Ana Maria Vicedo Cabrera**, Swiss Tropical and Public Health Institute, Basel
Location	**Basel**, details will be announced
Course Fees	SSPH+ PhD Students 0.— External MD/PhD Students 300.— External Academics 850. — Others 1250. — (The cost scheme depends on the Number of ECTS. Per ECTS participants are asked to pay 300,- CHF, 850,- CHF or 1250,-CHF, respectively)
Registration	Please register online on our website
Deadline	**17 September 2016**
Max. Attendance	20 (preference is given to SSPH+ PhD Students)

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