

Introduction to hierarchical/multilevel models for the analysis of clustered data

Facilitators

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Description

This course is designed to equip participants with the fundamental concepts and techniques necessary for the analysis of clustered data. In many research fields and study designs, including epidemiology and clinical trials, data are often collected in clustered or hierarchical structures. Examples include repeated measurements of the same subject over time, data grouped by family or school or other type of units, and cluster randomized trials. Ignoring clustering can lead to incorrect standard errors and overly precise confidence intervals, thereby compromising the validity of the conclusions of the study.

Objectives

By the end of this course, participants will:

- Understand the implications of data clustering
- Familiarize with hierarchical models
- Perform clustered data analysis
- Describe statistical methods for longitudinal data
- Critically evaluate methods
- Interpret and communicate results
- Effectively report results
- Utilize statistical software such as Stata and R

Dates

21 – 23 October 2025

Eligibility

SSPH+ IGC students, clinicians, researchers, public health specialists, and other healthcare professionals who aim to analyse clustered data.

Participants are expected to have a foundational understanding of linear and logistic regression modeling and possibly some practical experience with statistical software such as Stata or R.

Course Structure

Mixture of theoretical, face-to-face lessons, intertwined with practical hands-on sessions

Assessment

End-of-course practical assessment

Credits

1 ECTS

Preliminary Work (software installation and pre-readings): 4 h; Contact time (lessons and practicals): 21 h

(1 ECTS corresponds to appr. 25-30 hours workload)

Location

Bern University of Applied Sciences, [Murtenstrasse 10](#), Bern, Room 123

Course Fees

IGC course fees	1 ECTS
SSPH+ IGC PhD and MD Students	30 CHF
Postdocs from SSPH+ partner institutes	30 CHF
External PhD students and external MD students and Swiss Public Health Doctors in Training	300 CHF
Others	800 CHF

Registration

<https://www.conftool.com/ssph-phd-courses2025/>

Deadline for registration

21 September 2025