

## 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

**20 – 22 October 2026**

### Eligibility

SSPH+ IGC students, clinicians, researchers, public health specialists, and other healthcare professionals who aim to analyze 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

University of Applied Sciences and Arts of Southern Switzerland (SUPSI), Lugano, room tba

## Course Fees

| IGC course fees  | 1 ECTS  |
|--|---------|
| SSPH+ IGC PhD and MD Students  | 30 CHF  |
| Postdocs from SSPH+ partner institutes with a SSPH+ Faculty Member as line manager   | 30 CHF  |
| External PhD students, external MD Students, postdocs from SSPH+ partner institutes without a SSPH+ Faculty Member as line manager and Swiss Public Health Doctors in training | 300 CHF |
| Others   | 800 CHF |

## Registration

<https://www.conftool.com/ssph-phd-courses2026/>

## Deadline for registration

20 September 2026