

Causal inference for population health sciences

Facilitators

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Description

This 4.5-day in-person course, comprising a mix of lectures and hands-on practical sessions, is aimed at students who want to gain a fundamental understanding of what causal inference is and how it might apply to their own research.

The course will cover defining the research question in a causal framework, creating a direct acyclic graph, identifying valid covariate adjustment sets, and selecting a method for estimating the causal contrasts. We will guide the learning through lectures followed by practical sessions applying the knowledge gained. The practical sessions will be carried out using R software.

Objectives

Students will:

- understand the setting for which causal inference is warranted and the framework for potential outcomes
- understand the difference between causal estimands, estimators, and estimates
- understand how to generate and interpret a directed acyclic graph
- understand hypotheses underlying the identification of causal effects,
- identify the most suitable methods to answer different research questions,
- run basic analyses with the methods presented

Dates

18-22nd September 2023

Eligibility

Open to PhD students of the SSPH+ Inter-university Graduate Campus; other students and external participants are welcome to apply.

Prerequisites

Prerequisites for the course are knowledge in statistics, especially statistical inference and regression modeling with some experience in implementing statistical analysis. Familiarity with R/R studio is preferred for use during the practical sessions.

Course Structure

4.5 days with time split between lectures and practical sessions.

Assessment

Class participation, practicals and quizzes.

Credits

2 ECTS

Preliminary Work: 10 h; Contact time: 36 h; In-course work: 5-10 h

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

Location

Swiss TPH, Kreuzstrasse 2, 4123 Allschwil, Switzerland, room tba

Course Fees

IGC course fees	1 ECTS	2 ECTS
SSPH+ IGC Students	30 CHF	30 CHF
Postdocs from partner universities	30 CHF	30 CHF
External PhD students and MD students	500 CHF	1'000 CHF
Others	1'000 CHF	2'000 CHF

Registration

<https://www.conftool.com/ssph-phd-courses2023>

Deadline for registration

18 August 2023