SSPH+ INTER-UNIVERSITY GRADUATE CAMPUS SWISS SCHOOL OF PUBLIC HEALTH

in collaboration with

UNIVERSITÉ DE GENÈVE

UNI FR UNIVERSITÉ DE FRIBOURG UNIVERSITÄT FREIBURG

Advanced Survey Methods for Population Health

Facilitators

- **Prof. Dr. Delphine Courvoisier,** PhD, Quality of Care Division and Rheumatology division, Geneva University Hospitals and University of Geneva
- **Renaud Lieberherr,** MSc, Federal Statistical Office
- **PD Dr. Stéphane Cullati,** PhD, senior lecturer in epidemiology, Population Health Laboratory, University of Fribourg

Description

Surveys are essential tools in population health research to monitor health trends, evaluate public health interventions, and explore determinants of health across diverse populations. This advanced course builds on foundational knowledge of questionnaire design and introduces participants to the conceptual and practical complexities of survey methodology in public health.

The course covers advanced topics such as:

- Principles of sampling theory and its application in health research
- Recruitment strategies tailored to the general population but also to rare and vulnerable populations, and sample size calculation
- Issues of representativeness, validity, transportability, and bias
- Comparative modes of data collection (e.g., computer assisted telephone interviews, computer assisted web interview)
- Use of specialized survey tools and experimental designs
- Integration of digital tools and technologies (randomization)
- Ethical, legal, and data protection considerations in survey research
- Students will gain practical experience in designing and implementing surveys, managing data, and addressing real-world challenges in population health research. The involvement of the Swiss Federal Statistical Office (FSO) providing students with

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exposure to ongoing national survey initiatives with a focus on the Swiss Health Survey, the largest survey on Population health in Switzerland.

Objectives

The course aims to equip participants with advanced theoretical and practical competencies in survey methodology for population health sciences and research. By the end of the course, participants will be able to:

- Understand and apply principles of sampling theory, including sample size calculation and oversampling strategies for vulnerable and rare populations.
- Design and evaluate recruitment strategies that are ethically sound and contextually appropriate.
- Critically assess representativeness, validity, transportability, and biases in survey-based research.
- Select and implement appropriate modes of data collection.
- Develop and apply specialized survey tools and experimental designs
- Manage survey data effectively, including metadata documentation and weighting techniques.
- Understand ethical, legal, and data protection issues.
- Collaborate with field partners and apply course concepts in real-world settings (street-level data collection, hands-on survey development, …).
- Design a personal research proposal integrating advanced survey methods for population health.

Dates

12 – 16 April 2027

Eligibility

SSPH+ IGC students and postdocs. External participants are welcome to apply.

Course Structure

1. Pre-course readings and preparation
2. Online and in-person lectures, with just in time learning
3. In-person group work
4. Street data collection

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Pre-requisites	**Necessary: Basic knowledge of R** **Recommended: IGC course "Designing and Using Questionnaires for Research: Practical Insights and Challenges"**
Assessment	Exercises and group work participation during the course; small group research proposal after the module (4 to 5 pages)
Credits	**2 ECTS** Preliminary Work: 10h; Contact time: 28h; Field work: 2h; Homework: 15h (1 ECTS corresponds to appr. 25-30 hours workload)
Location	**Day 1,2: University of Fribourg / Day 3: Online / Day 4: University of Fribourg / Day 5: Swiss FSO Neuchâtel**

Course Fees

	2 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	600 CHF
Others	1'600 CHF

Registration	https://www.conftool.com/ssph-phd-courses2027/
Deadline for registration	12 March 2027

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