

Public health surveillance and population health monitoring

Facilitators

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Description

Public health surveillance is the ongoing and systematic collection, analysis, and interpretation of health-related data, closely integrated with their timely dissemination and communication to those responsible for public health strategies and action on disease prevention and control. Methods and tools for surveillance and population health monitoring, initially developed for infectious diseases and outbreak control, are now applied to other health conditions like chronic diseases, mental health or occupational and environmental health.

With the advances in the field of data science and the growing access to multiple types and increasing volumes of data, the field of surveillance and health monitoring is going to adapt and evolve rapidly. This includes moving to a wider scope of applications, for example, surveillance may also include monitoring of risk factors associated with adverse health events or monitoring of health care services. This also implies using new methods for analyzing data, as well as tools for visualizing and communicating data, depending on target publics.

Objectives

Our aim is to work with participants on concrete examples of public health surveillance and monitoring programs from the Swiss context, with the target to help them understand some of main challenges associated with their implementation and future perspectives.

By the end of the course, the participants should be familiar with the principles and methods of public health surveillance. In particular, they should:

- Understand the challenges of surveillance and how they relate to policy making, epidemiology, health data science and research
- Know and handle the development of surveillance indicators depending on data available (census and vital statistics, national health surveys, registries, but also medico-administrative data, data from social media or google)
- Know the utility, validity and limitations of health indicators
- Correctly interpret commonly used surveillance indicators
- Understand the basics of syndromic surveillance and epidemic forecasting
- Understand the basics of data visualization tools for communication purposes

Dates

20 - 23 November 2023

Eligibility

SSPH+ PhD students, researchers and public health staff with basic training in public health surveillance or population health monitoring.

The course consists of lectures and computer exercises (using R, R Markdown, R Shiny and PowerBI). Basic instructions for installation, including packages used in the course will be provided two weeks before the beginning of the course). You have to bring your own laptop to the course.

Please note this is an advanced course. Basic principles of public health surveillance are addressed in the course "Foundations of Public Health Science" and students are invited to take this course before, if possible.

Course Structure

Lectures, individual exercises and group work

Assessment

In-class assignments and personal work, to be handed in after the course

Credits

2 ECTS

Preliminary Work: 8 h; Contact time: 24 h; In-course work: 8 h; Wrap-Up Work: 24 h

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

Location

Center for primary medicine and public health (Unisanté) – University of Lausanne (Biopôle Campus)

Course Fees

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

Registration

www.conftool.com/ssph-phd-courses2023

Deadline for registration

20 October 2023