

GIS for Public Health

Facilitator

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Description

The physical and social environment that surrounds us plays an important part in our health and wellbeing. The geography concept of 'place' thus cannot be ignored in public health. Whether investigating the level of environmental pollution, access to recreation or health services, or the patterns or spread of disease, Geographic Information Systems (GIS) provide the standard platform for exploring spatial attributes and relationships between our environment and health.

This course offers an introduction to GIS and how it is used in public health and epidemiological research, with a focus on exposure assessment. It will introduce students to the basics including: working with and integrating spatial and non-spatial data; geographic scale and spatial precision; projections; geocoding; visualisation; thematic mapping; and understanding spatial relationships. Specific skills and tools will also be introduced in relation to methods for route analysis and for spatial linkage of exposure, contextual and confounder information for epidemiological or health risk assessment studies. Students will apply their new skills in a case study based either on their own data or on available datasets for defined topics.

This course will be a mix of lectures, demonstrations and plenty of practical time for hands-on data analysis in industry standard GIS (ArcGIS, QGIS, R). No prior knowledge of GIS is required, though completion of pre-course work is essential preparation for this intensive course.

Objectives

Students will gain knowledge in the fundamentals of GIS for spatial data handling and analysis. By the end of the course, students will

- Understand how GIS can be used to enhance public health and research;
- Be able to acquire, add, manipulate, visualise and map spatial data in a GIS; and
- Be able to perform basic spatial analyses.

Dates	06 – 10 November 2023										
Eligibility	Open to PhD students of SSPH+ public health program; other students and external participants are welcome to apply for limited spaces										
Course Structure	5-days hands on experience on GIS software, interspersed with lectures. The course includes pre-course and in-class assignments, and will culminate in group presentations on practical case studies.										
Assessment	Final group presentation										
Credits	2 ECTS Preparation/homework 8 h, Contact 45 h (1 ECTS corresponds to appr. 25-30 hours workload)										
Location	Basel (University of Basel or Swiss TPH), room tba										
Course Fees	<table border="1"> <thead> <tr> <th></th> <th>2 ECTS</th> </tr> </thead> <tbody> <tr> <td>SSPH+IGC Students</td> <td>30 CHF</td> </tr> <tr> <td>Postdocs from SSPH+ partner institutes</td> <td>30 CHF</td> </tr> <tr> <td>External PhD students and MD students</td> <td>1'000 CHF</td> </tr> <tr> <td>Others</td> <td>2'000 CHF</td> </tr> </tbody> </table>		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
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Registration	www.conftool.com/ssph-phd-courses2023										
Deadline for Registration	06 October 2023										