

## Observational epidemiology workshop: advanced methods for data and exposure-response analyses

### Description

This workshop will introduce innovative methods for exposure-response analyses in observational epidemiological research. The following topics will be covered:

- regression analyses with generalized linear models (glm)
- use of smoothing and splines in generalized additive models (gam)
- Poisson time series analysis
- quantile regression

During the workshop we will discuss research questions and analytical problems of the students' datasets. In that way we will deal with common issues in epidemiological data analysis and provide analytic solutions for dealing with complex issues like selection bias, control for confounding, clustering of data, complex data distributions. etc.

### Objectives

By the end of this course, participants will be able to perform quantitative analyses of epidemiological data from observational studies dealing with a broad spectrum of research questions. In particular, students will learn how to analyze complex exposure-response patterns.

### Dates

**05 – 09 September 2016**

### Eligibility

We will work with the software R. Participants should be familiar with the statistical software R. This is an advanced statistical course. The course is aimed at researchers with an in-depth interest in applied data analysis. Participants should know the principals of linear and logistic regression modelling and have practical experience with regression modelling.

### Course Structure

In this workshop we will follow a practical and applied approach. Students will receive datasets to explore different analytic strategies. The group work will be complemented with lectures by Prof. Joel Schwartz and individual computer exercises.

### PhD Program:

Program Coordination Ann Walser

Academic Lead Prof. Matthias Egger  
Prof. Thomas Abel  
Dr. Nicole Bender

### Contact:

Address ISPM Bern  
Finkenhubelweg 11, CH-3012 Bern  
Telephone +41 31 631 34 04  
Email [phdph@ssphplus.ch](mailto:phdph@ssphplus.ch)  
Website [www.ssphplus-phd.ch](http://www.ssphplus-phd.ch)

	<p>Students will present an analytic problem from their own research to the lecturer, tutors and fellow students. Possible solutions to this problem will be developed in an interactive way.</p> <p>Students should bring their own laptop for the practical work.</p>								
<b>Assessment</b>	Active participation in the workshop and short presentation of an analytic problem from the own work.								
<b>Credits</b>	<p><b>2 ECTS</b></p> <p>Prelim. Work, 7 h; Contact time, 40 h; Homework/ Wrap-Up Work: 3 h</p> <p>(1 ECTS corresponds to approx. 30 hours' work)</p>								
<b>Facilitators</b>	<p><b>Prof. Joel Schwartz</b>, Harvard School of Public Health, United States of America</p> <p><b>Prof. Martin Rössli</b>, Swiss Tropical and Public Health Institute, Basel</p> <p><b>Dr. Ana Maria Vicedo Cabrera</b>, Swiss Tropical and Public Health Institute, Basel</p>								
<b>Location</b>	Swiss Tropical and Public Health Institute, University of Basel, Room will be announced								
<b>Course Fees</b>	<table border="0"> <tr> <td>SSPH+ PhD Students</td> <td>0.—CHF</td> </tr> <tr> <td>External MD/PhD Students</td> <td>600.—CHF</td> </tr> <tr> <td>External Academics</td> <td>1700.—CHF</td> </tr> <tr> <td>Others</td> <td>2500.—CHF</td> </tr> </table> <p>(The cost scheme depends on the number of ECTS. Per ECTS participants are asked to pay 300,- CHF, 850,- CHF or 1250,-CHF, respectively)</p>	SSPH+ PhD Students	0.—CHF	External MD/PhD Students	600.—CHF	External Academics	1700.—CHF	Others	2500.—CHF
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<b>Registration</b>	Please register online on our <a href="#">website</a>								
<b>Deadline</b>	<b>5 August 2016</b>								
<b>Max. Attendance</b>	20 (preference is given to SSPH+ PhD Students)								

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Telephone	+41 31 631 34 04
Email	<a href="mailto:phdph@ssphplus.ch">phdph@ssphplus.ch</a>
Website	<a href="http://www.ssphplus-phd.ch">www.ssphplus-phd.ch</a>



PhD Program Public Health



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[www.ssphplus-phd.ch](http://www.ssphplus-phd.ch)