



## Introduction to Epidemiology and Study Designs

### Description

According to the dictionary of epidemiology, «Epidemiology is the study of the distribution and determinants of health-related states or events in specified populations and the application of this study to control of health problems». In this course module we will cover basic epidemiologic terms and definitions, as well as the main epidemiologic quantities we encounter in public health related publications and in clinical studies. Furthermore, you will learn to identify the study designs most often used in population-based and clinical epidemiology.

### Objectives

- Basic terms in demography (sex and age structure of the population, birth and death rates, life expectancy and infant mortality)
- Study designs we cover: Cross-sectional, cohort and case-control studies, intervention studies and diagnostic accuracy studies
- Basic quantities in epidemiology: Prevalence, incidence rates (crude and ageadjusted), risk ratio, risk difference, number needed to treat, odds ratio, sensitivity, specificity

### Dates

**12 + 15 May 2022 (Friday & Monday)**

### Equipment

Participants must bring their own laptops.

### Contact:

Course coordination:

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# CAS in Clinical Research



## Course Structure

The course consists of two days of work in class and completion of tasks between the two days. The course follows in part the textbook «Essential Epidemiology 3rd edition (2017)» by Penny Webb and co-authors. The book will be sent to the course participants in advance and some reading (about 100 pages) will be necessary before the first day and between the two course days. The course material will be made available on a password-protected course homepage (<http://intro-epi.ispmbern.ch/>).

## Assessment

Written exam during the course

## Credits

**1 ECTS**

12 hours preparation, no postprocessing

12 hours of off-class work and course tasks between the two course days

(1 ECTS corresponds to appr. 30 hours' work)

## Facilitator

Prof. Marcel Zwahlen & Prof. Claudia Kühni, Institute of Social and Preventive Medicine (ISPM), University Bern

## Location

University of Bern, Mittelstrasse 43, 3012 Bern

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