

## Introduction to Epidemiology and Study Designs

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<b>Goal</b>	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 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.
<b>Contents</b>	<ul style="list-style-type: none"> <li>- Basic terms in demography (sex and age structure of the population, birth and death rates, life expectancy and infant mortality)</li> <li>- Study designs we cover: Cross-sectional, cohort and case-control studies, intervention studies and diagnostic accuracy studies</li> <li>- Basic quantities in epidemiology: Prevalence, incidence rates (crude and age-adjusted), risk ratio, risk difference, number needed to treat, odds ratio, sensitivity, specificity</li> </ul>
<b>Methods</b>	<p>The module consists of two days of work in class and completion of tasks between the two days. The module follows in part the textbook «Essential Epidemiology 3rd edition (2017)» by Penny Webb and co-authors. Some reading (about 100 pages) will be necessary before the first day and between the two module days. The teaching materials will be made available on a password-protected module homepage (<a href="http://intro-epi.ispmbern.ch/">http://intro-epi.ispmbern.ch/</a>).</p> <p>In total 12 hours of off-class work and task completions are expected between the two teaching days.</p>
<b>Exam</b>	Written exam during the module
<b>Preparation and postprocessing</b>	<p>12 hours preparation, no postprocessing</p> <p>12 hours of off class work between the two module days</p>
<b>ECTS Credits</b>	1 ECTS Credit
<b>Organisation</b>	Institut für Sozial- und Präventivmedizin der Universität Bern
<b>Module lead</b>	<p>Prof. Dr. med. Claudia Kuehni, Institut für Sozial- und Präventivmedizin der Universität Bern</p> <p>Prof. Dr. Marcel Zwahlen, Institut für Sozial- und Präventivmedizin der Universität Bern</p>
<b>Dates</b>	15 and 19 May 2025
<b>Location</b>	Bern
<b>Fees</b>	CHF 1'100.-
<b>Registration deadline</b>	15 March 2025
<b>Additional information</b>	Teaching languages are English and German.