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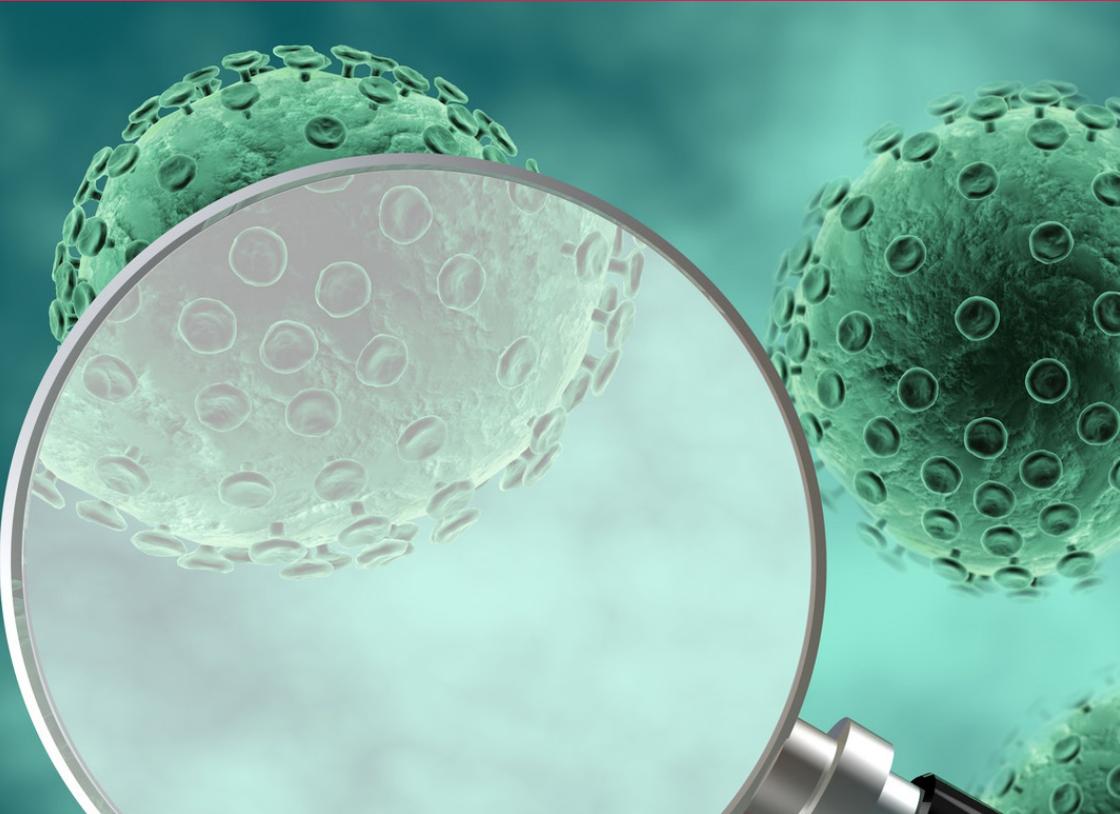
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**UNIVERSITÄT  
BERN**

# CAS Clinical Research

Certificate of Advanced Studies in Clinical Research  
in Health Care Organisations (CAS CRHCO)

2023/2024



# CAS Clinical Research

*Clinical research determines the safety and effectiveness of medications, medical devices, diagnostic tests and procedures, treatment regimens, and preventive interventions used in health care. The CAS CRHCO is a continuing education program aimed at health professionals and graduate students interested in patient-oriented clinical and health services research.*

## Goals of the Course

In the CAS in Clinical Research you will learn to plan and conduct clinical research projects for a well-defined research question, to describe data from clinical studies, and to apply statistical methods and regression models commonly used in clinical research. The CAS also covers prognostic research and systematic reviews of multiple studies and meta-analyses of their results. Finally, you will also learn how best to communicate the results of clinical research.

At the end of the CAS in Clinical Research, participants:

- Have a thorough understanding of the importance of having a precise research question and how to translate this question into the design, implementation, and analysis of various types of studies in clinical research: observational studies, diagnostic and prognostic studies, randomized controlled clinical trials, systematic reviews and meta-analyses.
- Can apply statistical methods to describe data from clinical studies and use regression models (linear, logistic, Cox, Poisson) commonly used in clinical research, and be able to use a statistical software (R).
- Can assess study designs and protocols and published studies with regard to the quality of study implementation, data acquisition, measurement methods, and analysis.
- Can interpret the results of clinical studies, and discuss their strengths and limitations and the relevance for treatment decisions.

Learn to plan and conduct clinical research projects

Apply statistical methods

Assess study designs

## Course Program

The program involves approximately 450 hours of work in modules that are generally 3-day courses. Completion of the CAS usually takes 2 years, but it can be done in 1 or 3 years, and leads to the acquisition of 15 ECTS points. Participants also have the opportunity to attend elective modules according to their particular interests.

### Basic Modules

- Introduction to study designs and epidemiological measures
- Principles of biostatistics
- Introduction to the statistical software R and data capture software REDCap
- Regression models in clinical research and epidemiology
- Evaluation of diagnostic and screening tests
- Prognostic studies and modelling
- Randomized controlled clinical trials
- Systematic reviews and meta-analyses

### Advanced Modules

Participants can focus on their own interests and strengthen aspects of the basic modules by choosing elective courses in up to 2 of the advanced modules:

- Advanced statistical and epidemiological methods
- Health technology assessment
- Writing research proposals and scientific manuscripts

## Organization and Conduct

### Course Directors

Prof. Marcel Zwahlen, ISPM  
PD Dr. Sven Trelle, CTU Bern

### Language

All courses, exams, and course materials are in English.

### Fees

CHF 9600

### Organizer

Universität Bern, Institute of Social & Preventive Medicine

More information  
[www.cas-clinicalresearch.ch](http://www.cas-clinicalresearch.ch)

Registration  
[www.cas-clinicalresearch.ch](http://www.cas-clinicalresearch.ch)

Start  
4 April 2023  
Kick-off meeting

## Contact

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