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 (Stata).

- 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.

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 Stata 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. Matthias Egger, Prof. Marcel Zwahlen, ISPM
Prof. Hansjakob Furrer, Prof. Urs Fischer, Inselspital
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
Contact

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