Research Studies Board (FUN)

Epidemiology II – Epidemiological design and data analysis
MEEPEP2

Epidemiologi II – Epidemiologisk design och dataanalys

1.5 credits   Third cycle

General information

The course is offered on a full-time or part-time basis for doctoral students at the Faculty of Medicine, and is aimed at all those conducting or evaluating patient or population-based research on individual data. Subject to availability, the course is also open to other applicants such as researchers holding a PhD or other staff associated with the faculty.

Language of instruction

English

Aim

The aim of the course is to help in raising the quality of point of care clinical or health science research as well as register-based population research through introducing a specialised epidemiological approach and methodology in all phases of such research.

Learning outcomes

On completion of the course, the students shall be able to

- apply and critically review common epidemiological study designs
- conduct basic epidemiological data analyses for cohort follow-ups and case control studies
- give an account of and apply good reporting practice for epidemiological research results
- evaluate the scope of systematic error in epidemiological results through simple sensitivity analyses

Course content

The course comprises three different themes:

1) Design, analysis and evaluation of cohort follow ups
- design aspects, fixed and variable follow-up periods, closed cohorts compared with dynamic populations

- logistic regression in fixed follow up periods
- Kaplan-Meier analysis and Cox regression
- common sources of error and simple sensitivity analyses

2) Design, analysis and evaluation of case control studies
- design aspects for cohort-based and population-based case control studies, principles for selection of controls, matching
- logistic regression
- common sources of error and simple sensitivity analyses

3) Reporting of epidemiological research results
- international guidelines (STROBE)
- description of study design and study populations
- reporting of multivariable analyses
- simple sensitivity analyses

Course design

On the course, compulsory teaching components alternate with individual and group work as well as reading before the exam. The teaching components consist of interactive lectures, practical exercises and group discussions.

Assessment

The course is assessed through active participation in all the course components and through a written individual examination.

Grades

The grades awarded are Pass and Fail.

Entry requirements

To be admitted to the course the applicant must have Pass grades in Epidemiology I and Applied Statistics II at the Faculty of Medicine in Lund or equivalent.

Reading list

Rothman KJ. Epidemiology - an introduction. Oxford University Press 2nd edition 2012.

Vittinghoff E et al. Regression methods in biostatistics. Linear, logistic, survival and repeated measures models. Springer 2nd edition 2012.

Reading instructions for the textbook and other study resources will be distributed at the start of, and during, the course.