DEPARTMENT OF PSYCHOLOGY

UNIVERSITY OF GOTHENBURG

PX33004   Analysis of data from longitudinal designs, 7.5 credits

Analys av data från longitudinella designer, 7,5 högskolepoäng

Third-cycle level / Forskarnivå

Confirmation

This syllabus was confirmed by the Department of Psychology on 2018-09-21, and was last revised on 2022-11-28. The revised course syllabus is valid from Spring semester 2023.

Responsible Department
Department of Psychology, Faculty of Social Sciences

Entry requirements

The student should be admitted to a PhD program.

The student should have passed the third cycle course General Research Methodology: Design, Analysis, and Report (15 HEC), or obtained comparable knowledge from other courses.

Learning outcomes

A student that successfully completes the course should be able to:

Knowledge and understanding

Define and explain basic principles concerning application of multilevel modeling (MLM) and structural equation modeling (SEM) to longitudinal data analysis

Competence and skills

- Use MLM and SEM to model and draw inferences from longitudinal data
- Use programs to execute longitudinal data analyses
- Present own longitudinal data analyses in a peer reviewed professional journal format

Judgement and approach

- Evaluate pros and cons of different longitudinal analytical models and methods
- Review and critically scrutinize own and others applications of MLM and SEM for

longitudinal data analyses
- Critically evaluate studies applying MLM and SEM for analyses of longitudinal data

Course content

The course focuses on basic principles concerning design and analysis of longitudinal data in psychological research. Longitudinal data implies at least two (but preferably more) repeated measurements of the same individuals or other entities. Both MLM and SEM (i.e., latent growth curve models) will be used for analytical purposes. The course covers theory driven analyses, longitudinal data preparation, model specification, estimation methods, model evaluations, and interpretation of parameters in longitudinal models including both time constant and time varying covariates.

Types of instruction

Teaching will be in the form of lectures, seminars, and exercises.

Language of instruction
The course is given in Swedish but can be given in English if necessary.

Grades

The grade Pass (G) or Fail (U) is given in this course.

Types of assessment

Examination will be in the form of written assignment, active participation in the course seminars, and short presentation of the student's own data analyses and assignment.

For passing the course the students need to pass each one of the examination moments

Course evaluation

The course coordinator is responsible for ensuring that doctoral students are given the opportunity to provide an anonymous, written course evaluation at the end of the course. After the course is finished, the course coordinator writes a course report, which includes a summary of the course evaluation. The course report is processed in the Drafting committe for doctoral studies (FUB) and will be communicated to those doctoral students who completed the course evaluation, as well as the doctoral students who will start the next course. These reports will be made available for doctoral students.