Course Syllabus

Introduction to Structural Equation Models 7.5 Credits, Third Cycle

Learning Outcomes

Upon completion of the course, the doctoral student will be able to:

- explain the basic theoretical foundation and practical use of Structural Equation Models (SEM)
- apply SEM on real problems
- interpret and present the results
- estimate structural equation models with maximum likelihood and least squares and be able to evaluate the results.

Course Content

The course deals with the logical and statistical theory of Structural Equation Models. Emphasis is, however, on the practical use of models and methods in applied research. The course covers modern statistical aspects on regression analysis, exploration and confirmative factor analysis, and general structural equations with and without latent variables for one or more groups.

The course deals with estimation methods for Structural Equation Models based on various types of data: normal distributed and ordinal data.

Assessment

The assessment takes place in the form of a written exam and application assignments

Forms of Study

Lectures and computer exercises

Grades

The Swedish grades U–G.

Prerequisites

General entry requirements for postgraduate studies.

Other Information

Participants are expected to have an ongoing or planned research project. Participants are expected to have a sound working knowledge of the most basic principles of statistical

inference (e.g., standard errors, hypothesis tests, confidence intervals), and should preferably have a basic understanding of linear regression theory.
The course will be given in English.
Doctoral students who have not been admitted to a doctoral programme at Dalarna University are admitted to the course depending on space availability

Subject:
Microdata Analysis

Approved:
Approved 17 June 2020
Valid from 17 June 2020