

Syllabus for Introduction to structural equation modeling (SEM) in LISREL

Introduktion till strukturell ekvationsmodellering (SEM) i LISREL

7,5 credits

Course code: FHS0025

Education cycle: Third cycle

Main field of study: Business Studies

Grading system: FOG One-grade scale (G pass)

Established: 2020-02-05

Established by: The Department Board

Applies from: Week 10, 2020

Entry requirements: Admitted as a PhD Student at an institute of higher education in Sweden or abroad. Proficiency in English.

A basic understanding of statistics such as regression and exploratory factor analysis.

Responsible department: Department of Business Studies, in cooperation with the Department of Statistics at Uppsala University

DECISIONS AND GUIDELINES

The course is recommended for students in social sciences who intend to work with structural equation modeling.

LEARNING OUTCOMES

This course introduces the logic and practical approach to structural equation modeling in LISREL. The emphasis is on the practical use of models and methods as research tools in the social and behavioral sciences.

At the end of the course, successful participants will possess an enhanced theoretical and practical understanding of structural equation modeling and will be able to apply such models to real-world data for the analysis of models with, and without, latent variables.

CONTENT

The course covers modern statistical aspects of regression models, exploratory and confirmatory factor analysis, and general structural equation models with or without latent variables for single and multiple groups and for continuous and ordinal variables. The course also covers the estimation of models for normal, non-normal, and ordinal variables. This includes maximum likelihood, robust maximum likelihood, and various least-squares methods.

INSTRUCTION

The instructors will teach the entire course together as a team in the classroom.

The course will be taught in English, although students are welcome to speak and write in Swedish.

ASSESSMENT

Participants are required to complete supplied computer lab exercises that focus on teaching participants how to apply structural equation modeling using LISREL.

If there are special reasons for doing so, an examiner may make an exception from the method of assessment indicated and allow a student to be assessed by another method. An example of special reasons might be a certificate regarding special pedagogical support from the University's disability coordinator.

Uppsala University does not accept cheating or plagiarism. Suspected incidents of cheating or plagiarism are reported to the Vice-Chancellor, who may issue a formal warning to the student or suspend the student from studies for a certain period.

NOTE: Only completed courses can count toward a degree.

ADDITIONAL INFORMATION¹

Participants are given copies of all overheads. We highly recommend participants install the student version of LISREL and work through the examples in the classroom during lectures. Special consideration must be taken for installing LISREL on Macs since it is only designed for installation on PCs.

¹ This information is not part of the Syllabus, but is some practical information for the participants.