



APPLIES TO ACADEMIC YEAR 2013/2014

## DRE 1009 Multilevel Analyses

### Programme

#### Responsible for the course

Karl Gustaf Jøreskog

#### Department

Department of Economics

#### Term

According to study plan

#### ECTS Credits

6

#### Language of instruction

English

### Introduction

#### **Please note that this course will be revised before it is offered again**

Multilevel analysis is the analysis of multilevel data where some observational units are nested within other observational units. For example, students are grouped in classes, classes are grouped in schools, and so on. Multilevel models, also called hierarchical linear models and their associated techniques take the inherent data into account in the analysis.

Lectures and Computer Exercises (30 hours).

### Learning outcome

Students should learn the theory and practice of Multilevel Analysis so as to be able to carry out such analysis with LISREL on empirical data.

### Prerequisites

Either DRE 1011 Quantitative Research Methods: Multivariate Statistics or DRE 1004 Multivariate Statistics.

Admission to a PhD Programme is a general requirement for participation in PhD courses at BI Norwegian Business School.

External candidates are kindly asked to attach confirmation of admission to a PhD programme when signing up for a course with the doctoral administration. Other candidates may be allowed to sit in on courses by approval of the courseleader. Sitting in on courses does not permit registration for courses, handing in exams or gaining credits for the course. Course certificates or conformation letters will not be issued for sitting in on courses

### Compulsory reading

#### Books:

Bollen, Kenneth A. & Patrick J. Curran. 2006. Latent curve models : a structural equation perspective. Hoboken, N.J. : Wiley-Interscience

Snijders, T.A.B. and Roel J. Bosker. 1999. Multilevel analysis : an introduction to basic and advanced multilevel modeling. London : Sage

### Recommended reading

#### Books:

Heck, Ronald H. & Scott L. Thomas. 2009. An introduction to multilevel modeling techniques. 2nd ed. New York :

Routledge  
Hox, J. J. 2010. Multilevel analysis : techniques and applications. 2nd ed. New York : Routledge. Ny utgave forventes juni 2010

### Course outline

Importing data into LISREL and data management  
Regression analysis and generalized linear models  
Two- and three-level regression models  
Multilevel models with categorical outcomes  
Multilevel models for longitudinal data  
Latent curve models

### Computer-based tools

LISREL, It's learning / homepage

### Learning process and workload

#### Workload

Lectures and computer exercises  
30 hours  
Specified learning activities  
80 hours  
Autonomous student learning  
50 hours  
Three class presentations  
3 hours  
Total  
163 hours

### Examination

Termpaper.

The paper should be original work, and be written specifically for this course. The course will be graded pass / fail

### Examination code(s)

DRE 10092 accounts for 100% of the grade.

### Examination support materials

### Re-sit examination

Next time the course is offered

### Additional information

#### Code

#### Honour

honesty and trust are important to all of us as individuals, and represent values that are encouraged and promoted by the honour code system. This is a most significant university tradition. Students are responsible for familiarizing themselves with the ideals of the honour code system, to which the faculty are also deeply committed.

#### Any

violation of the honour code will be dealt with in accordance with BI's procedures for cheating. These issues are a serious matter to everyone associated with the programs at BI and are at the heart of the honor code and academy integrity. If you have any questions about your responsibilities under the honour code, please ask.