

# Topics in Survey Methodology and Survey Analysis, fall 2013

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### Lecturers

Part 1: [Prof. \(emer.\) Seppo Laaksonen](#)  
Part 2: [University Lecturer Kimmo Vehkalahti](#)  
Part 3: [Prof. Risto Lehtonen](#)

### Type

Advanced studies

### Code

796110

### Scope

Lectures and PC classes: 26 hours  
Credits: 4-6 ECTS credits

Assessment: Active participation during the course, exam 4 cu + optional homework assignment of 2 cu

### Description

The course covers materials on modern survey research methods used for empirical quantitative research in social and behavioral sciences and economics. Topics include: study design, sampling methods, questionnaire design, data collection and measurement, data cleaning (edit, imputation) and the analysis of complex survey data. The course is of applied type. Treatment of each method includes general description of the methodology, data requirements, computation, worked examples and real-world case studies. Selected computational tools (SAS, SPSS, Mplus) are practiced in computer classes.

The course is intended to post-graduate students in social and behavioral sciences and economics but also can be included in methodologically oriented Master studies (e.g. the REMS program) and Master studies in statistical science.

### Contents

Topics of Part 1 (Seppo Laaksonen): Study design, basic sampling techniques, data collection modes, treatment of nonresponse, reweighting, imputation techniques (single and multiple imputation), use of secondary data (data archives, administrative and register data sources). Examples include: The European Social Survey, The PISA and the Ethiopian Consumption and Welfare Monitoring Survey.

Topics of Part 2 (Kimmo Vehkalahti): Exploratory and confirmatory analysis, reliability, validity and measurement errors, data reduction with factor analysis, visualization of multidimensional data.

Topics of Part 3 (Risto Lehtonen): Hierarchical or multilevel data, analysis of multilevel or cluster correlated data, basic multilevel modelling, linear and logistic models, software.

### Lectures and PC classes

Part 1: Seppo Laaksonen  
Tuesday 10 Sept. at 14-20  
Thursday 12 Sept. at 14-17

Part 2: Kimmo Vehkalahti  
Tuesday 17 Sept. at 14-18  
Thursday 19 Sept. at 16-20

Part 3: Risto Lehtonen  
Tuesday 24 Sept. at 16-20  
Thursday 26 Sept. at 14-19

Venue: SSKH IT-sal, Snellmaninkatu 12.

### Exams

Course exams:  
Tuesday 8 October 2013 at 13:00-15:00, Unioninkatu 37 room SH4  
Thursday 17 October 2013 at 15:00-17:00, Unioninkatu 37 room SH4 (resit)

### Lecture materials

## Part 1 (Seppo Laaksonen)

You can find the first five lecture notes from the link below

[Concepts](#)

[Questionnaires](#)

[Sampling&Editing](#)

[WeightingExample on aggregation](#)

[Imputation](#)

[ESS-Data](#)

## Part 2 (Kimmo Vehkalahti)

Additional downloads:

[Introduction to SEM \(FiDPEL/KV\)](#)

[Selected ESS data set \(SPSS\)](#)

[ESS Finland Quickguide](#)

[ESS Finland Codebook](#)

[EU 1996 data set \(SPSS\)](#)

## Part 3 (Risto Lehtonen)

Additional downloads:

[Collection of supplemental materials to be discussed](#)

[Lehtonen-Pahkinen \(2004\) Sections 8.3 and 8.4 on logistic modelling of complex survey data](#)

[Lehtonen-Pahkinen \(2004\) Section 9.4 on multilevel modelling of complex survey data](#)

[Sampling Manual on sampling and estimation design](#)

## Computer classes

PART 3 Downloads for PC training:

[Instructions](#)

Program codes: (NOTE: The codes will be worked out in PC sessions)

[SAS code 1](#) for descriptive statistics on correlated responses (OHC data set)

[SAS code 2](#) for logistic regression on correlated responses (OHC data set)

[Mplus code](#) for design-based logistic regression with Mplus (COMPLEX type analysis)

Data sets:

[SAS data set OHC](#)

[SPSS data set OHC](#) NOTE: CSPLAN file is created in PC session

[Mplus data set OHC](#)

## Suggested reading

[Lehtonen R. and Pahkinen E. \(2004\)](#). Practical Methods for Design and Analysis of Complex Surveys. Second Edition. Chichester: John Wiley & Sons. Chapter 8.

e-book: Dawsonera [Helka](#)

Additional materials:

Edith D. de Leeuw, Joop Hox, Don Dillman (Eds.) (2008). International Handbook of Survey Methodology. European Association of Methodology Series.

Robert M. Groves, Floyd J. Fowler, Mick P. Couper, James M. Lepkowski, Eleanor Singer, and Roger Tourangeau (2009). Survey Methodology. Wiley Series in Survey Methodology

Jelke G. Bethlehem (2009). Applied survey methods: a statistical perspective. John Wiley and Sons.

## Web materials

VLISS-virtual laboratory in survey sampling <http://vliiss.helsinki.fi/>

## Homework assignments (2 cu)

[Common use homework based on OHC data](#)

Alternatively, own data set can be used

NOTE: For those who plan homework based on own data: Please prepare a 1 page document describing study problem, data, methods and tools, and send it to the instructors as email attachment (pdf).

## Registration

Did you forget to register? [What to do](#)