Analysis of complex survey Data, spring 2016

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Lecturer
Risto Lehtonen

Code
78405

Type and Credits
Intermediate level course (aineopinnot)
Exam (6 cu) or exam plus (optional) practical/theoretical homework (2 cu), total 8 cu

Advanced level course (syventävät opinnot)
Exam (6 cu) plus (compulsory) practical/theoretical homework (2 cu), total 8 cu

Scope
Lecture and PC lab sessions (6 x 4 = 24 hours), homework

Description
The course covers selected statistical methods intended for the analysis of data arising from complex surveys involving stratification, clustering and weighting. Such surveys are common in social, behavioral, health and educational sciences. Good examples are the PISA survey and the European Social Survey as well as the Health 2000 and 2011 surveys. In accounting for the survey design complexities, we concentrate on design-based and model-based methods applied to data analysis with linear and logistic regression. Case studies (mainly in social and health sciences) are presented. Computational tools (SAS, SPSS, R) are introduced and applied for real data sets. The course is of applied type.

When completing the course, students are expected to be familiar with main approaches, methods and computational tools for the analysis of complex survey data and becoming capable to apply the methods in typical real-world analysis situations. Basic knowledge in statistical inference, data analysis and statistical computation (SAS, SPSS, R) would help successful participation.

Target group
The course is intended for students majoring or graduating in statistics and for Master level and post-graduate (doctoral) students in their quantitative studies in applied sciences incl. social, behavioral and health sciences and economics (e.g. REMS). As an applied type course, the course also would fit well for statisticians and researchers in research institutes and elsewhere.

Schedule
III period

Lectures & PC lab sessions: Tuesday at 15-19, first lecture 19 January, final lecture 23 February.
Venue: Svenska social- och kommunalhögskolan (SSKH) IT-sal, City Centre campus, address: Snellmaninkatu 12
Exception: Tuesday 2.2. at 15-19 venue: Unioninkatu 35 seminar room 114

Exam: Tuesday 1 March at 15:00-17:00 Unioninkatu 35 seminar room 114

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<td>Exam</td>
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Course language
Slides & materials: English
Lecture sessions, default: English
PC lab sessions, default: English
Homework assignment: English or Finnish
Exam: English or Finnish

Moodle platform
Access to slides, supplemental materials, program codes, data sets etc.  
NOTE: A valid user account for UH computer system is required.

**Textbooks and selected articles**

e-book: Dawsonera [Heika](http://ebooks.dawsonera.com/)


**Web materials**

VLISS-virtual laboratory in survey sampling  
[http://vliss.helsinki.fi/](http://vliss.helsinki.fi/)

**Register for the course**

Did you forget to register? Please contact tilasto-info[at]helsinki.fi.