



Short course on

Statistics using



Tuesday 31.10.2017 and Wednesday 01.11.2017
09:15 – 12:15 and 13:15 – 17:00 h

Location: Fakultätszimmer, Anatomy Building, Länggassstr. 120

Lecturers from VPH Institute, Vetsuisse Bern

- Easy to use statistical software package (spreadsheet based, menu-driven) with good report and graphics capabilities
- Course mainly intended for graduate students and researchers starting to analyze their own data
- Some statistical theory and many applications are presented
- Basic computer literacy is required, some spreadsheet and introductory statistics knowledge helpful
- Course fees
 - Individuals from VPHI and Swiss Federal Food Safety and Veterinary Office (BLV): free of charge
 - Students and researchers from the Vetsuisse Faculty (BE, ZH) and affiliated institutions: 85 SFr.
 - External participants: 120 SFr.

The fees cover the course administration and a 2-year license of one of the most recent versions of NCSS.

Cancellations are possible up to two weeks before the course. The full course fee will be charged after that.

Participants should bring along a Laptop PC with XP/Vista/Win7 or Mac or Unix/Linux OS with a full Windows emulation, <http://www.ncss.com/support/windows-on-a-mac> onto which NCSS can be installed for use in the course (-> requires local administrator rights).

For additional information on the course or registration process please contact:

Dr. Beatriz Vidondo and Aurélie Tschopp
Veterinary Public Health Institute
✉ DCR-VPH, Vetsuisse-Fakultät, Universität Bern
Schwarzenburgstrasse 155, 3097 Liebefeld
☎ +41.31.631.5730 or ✉ beatriz.vidondo@vetsuisse.unibe.ch

Please use the respective link in the course announcement
on www.vphi.ch to register for the course

Proposed course topics (modifications of order are possible)

Module 1 - Data import, data management and descriptive statistics

- Learning objectives
- Different types of variables (numerical, ordinal, categorical), variable coding, missing values
 - Opening, creating and importing data (bases) into NCSS (*File open, import, save, export*)
 - Data management, recoding and transformations in NCSS (*Data sort, recode, transform, recalc*)
 - Descriptive statistics: frequencies, histogram, means and variances, various graphs & box plots (*Analysis descriptive statistics*)

Module 2 – Simple data analysis, cross tabulation, t-tests

- Learning objectives
- Basic knowledge of the statistical comparison (association) of frequencies and means between groups; identification of the „right“ statistical test; assumptions and hypothesis testing;
 - T tests (**Analysis** / parametric and non-parametric tests)
 - Frequency comparison (**Analysis / Descriptive Statistics** / Cross Tabulation; **Analysis / Mantel-Haenszel- test**)
 - Comparison of means/medians between groups (**Analysis / ANOVA / Analysis of Variance, Repeated-measures ANOVA**)

Module 3 – Correlation, simple linear and logistic regression

- Learning objectives
- Knowledge on the correlation between continuous variables and basic regression models
 - Identification of the correct statistical test, assumptions, hypotheses
 - Modules **Analysis Regression / Correlation / Correlation Matrix, Linear Regression, Logistic Regression**

Module 4 – Reviews and Exercises

- Learning objectives
- Use of the descriptive and analytic methods available within the NCSS package on selected (presented) or own data sets

- Prerequisites
- Basic PC knowledge (Windows OS, MS-Excel ...)

- Teaching tools
- Short presentations
 - PC exercises (small group work) and discussion

Recommended books (on which most exercises are based): Hüsler & Zimmermann "Statistische Prinzipien..." 4. Auflage 2006, and Dawson & Trapp "Basic & Clinical Biostatistics" 4th Ed. 2004. More details on the course schedule etc. will be provided for registered course participants in the week before the course.