

# Statistical modeling with SPSS for Clinical Veterinary Sciences

(4 credits)

Organized by ANIWEL Graduate School. Teacher: Vesa A. Niskanen, Ph. D., Assoc. Prof.

April 6-9, 2010 (24 academic hours)

On April 6-7 and April 9 btw 9:00-14:15

On April 8 btw 10:00-15

Computer class B 239 in the EE building in Viikki Campus, address: Agnes Sjöbergin katu 2

The course provides basic skills for statistical analysis with the SPSS (PASW) software. The participants will study in the class with the computers, and various data examples on veterinary and animal sciences are analyzed under the guidance of the teacher. The participants are strongly encouraged to analyze their own data sets during the course. In order to pass the course and obtain 4 credits, the participants should complete a brief statistical report in which SPSS is applied to data set (e.g. to his/her own data set).

Course contents will be tailored according to the interests of students and it may consist of:

## Descriptive statistics

- \* Creating the data matrix
- \* Basic statistics (means, standard deviations etc.)
- \* Frequency tables
- \* Cross tables
- \* Basic graphics
- \* Correlations
- \* Data transformations (recoding, grouping, mathematical operations, sum variables)

## Inferential statistics (tests include both parametric and non-parametric tests)

- \* Tests for normality
- \* Chi-square and likelihood ratio tests
- \* Tests for comparing two means (t-tests, Mann-Whitney test, Wilcoxon test and Levene's test for comparing variances)
- \* Tests for comparing more than two means (one-way ANOVA, two-way ANOVA, ANOVA repeated measurements test, Kruskal-Wallis ANOVA, Friedman's test)
- \* Linear regression analysis, non-linear regression analysis, logistic regression analysis
- \* Principal component analysis and factor analysis
- \* Item analysis
- \* Cluster analysis and discriminant analysis

The students of ANIWEL research school have the priority. Maximum of 28 participants are accepted in the order of registration. The registration site will close after that number is completed (+ five more additional for possible cancellations). The price of the course for the non-students will be fixed later.

Registration through this web address prior to March 25, 2010

<https://elomake.helsinki.fi/lomakkeet/19800/lomake.html>