

Core Facility Computational Bioanalytics

Statistical data analysis with SPSS for Life Science Researchers

This course is an introduction to statistical methods and statistical software. The course participant learns to handle the statistical software SPSS. On the basis of various practical examples, the participants learn to analyse and visualize data and how to interpret results. A main goal is to show participants the importance of quality control, assessing assumptions and ensuring adequate sample size. Upon successful completion of this course, participants will be familiar with basic statistical methods and will be able to interpret statistical analysis. The participants will have the ability to choose the suitable statistical analysis method for different data sets.

Day 1: Getting started with SPSS, data management, exploratory data analysis, outlier diagnostics, common plots, analysis of categorical data

Day 2: Hypothesis testing, type I and II errors, sample size, effect size, power calculation, confounding factors, Comparing means: t-test, multiple testing, one-factor-ANOVA, Mann-Whitney, Wilcoxon, Kruskal-Wallis, Friedman analysis of ranks, scientific presentation of results

Day 3: one-way ANOVA, factorial ANOVA, repeated measures ANOVA, MANOVA, ANCOVA

Day 4: Pearson, Spearman, Partial correlations, simple linear regression, multiple linear regression, binary logistic regression, scientific presentation of results

Teaching and learning method: 20% lecture and 80% interactive

Languages of instruction: English or German

Target audience: PhD students, technicians and researchers

Entrance qualifications: no

Costs: 150 Euro (University)/ 300 Euro (Company) per day; 10% off for booking more than 2 days.

Registration: zmf-sekretariat@medunigraz.at (deadline day 1-2: Oct 3rd 2017; day3-4: Oct, 17th 2017)

As the number of participants is limited (min. 3 and max. 8), please register early to confirm your seat!

DFP: 7-Points per day
Total: 28-Points

Day 1: October 9th 2017 (9 am - 4 pm)
Day 2: October 10th 2017 (9 am - 4 pm)
Day 3: October 23rd 2017 (9 am - 4 pm)
Day 4: October 24th 2017 (9 am - 4 pm)

ZMF seminar room 3rd floor O3-012

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