

Core Facility Computational Bioanalytics

**Statistical data analysis with SPSS for Life
Science Researchers**

SPSS basics and Group comparisons

This course is an introduction to statistical methods and statistical software. On the basis of various practical examples, the participants learn to analyse and visualize data using the software SPSS and get insight how to interpret statistical 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.

SPSS basics (Day 1) : Getting started with SPSS, data management, exploratory data analysis, outlier diagnostics, common plots, analysis of categorical data, scientific presentation of results

Group comparisons (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

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

Languages of instruction: English or German

Target audience: PhD students, technicians and researchers

Entrance qualifications for day 2: SPSS basics course

Costs: 150 Euro (University)/ 300 Euro (Company) per day; Each day can be booked separately.

Registration: zmf-sekretariat@medunigraz.at (deadline: February 2nd 2018)

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

Day 1: February 12th 2018 (9 am - 4 pm)

Day 2: February 13th 2018 (9 am - 4 pm)

ZMF seminar room ground floor (day1) and 3rd floor O3-012 (day2)

Contact: zmf-sekretariat@medunigraz.at

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**DFP: 7-Points per day
Total: 14-Points**