Instructor: Dr. Florian Battke, Dr. Battke SCIENTIA, Life Science Services

Date: November 2-4, 2020

Time: 9:00-14:30 h

Location: ONLINE course

Please register with the school management.

COURSE OUTLINE

Introduction of basic statistical principles

- Basic concepts of statistical data analysis
- General descriptive statistics

Statistical methods

- Background and requirements of statistical methods:
  - Distributions and test statistics
  - Confidence intervals
  - General method of hypothesis testing

- Applying statistical methods:
  - Basics of hypothesis testing

- Tests on outliers, Gaussian distribution and homogeneity of variance
- Parametric and non-parametric hypothesis testing
- Critical interpretation of test results
- Analysis of variance (one way ANOVA)
- Kruskal-Wallis / Friedmann test
- Post-hoc tests
- Two/three way ANOVA
- Correlation and regression analysis
- Linear and nonlinear regression
- Curve fitting and weighting
- Calibration curves
- Comparison of regression models

plus exercises