

Biostatistics (28893-01)

2 ECTS

Methods: Lectures, exercises, computer practicals

Assessment: Weekly assignments, written final exam.

Time: Wednesdays, 09:15-13:00, week 1-8

Place: Pharmazie-Historisches Museum, Grosser Hörsaal, Totengässli 3

Remarks: Mandatory for MSc in Infection Biology and MSc in Epidemiology. You must bring your own laptops with Stata installed.

Workload: 60 hours

- Lectures (contact hours): 8 lessons of 2 hours = 16 hours
- Practicals: 8 practicals of 2 hours = 16 hours
- Reading/study/assessment: 28 hours

Objectives: To understand and apply basic statistical concepts and methods (explorative and descriptive statistics, statistical inference); to understand and apply linear regression models for continuous outcome data; to be able to identify appropriate statistical methods for basic analytic problems and to interpret the results of such analyses; to gain insight into statistical thinking; to apply the statistical software STATA for data analysis.

Description: This course covers basic concepts and methods of biostatistics and quantitative epidemiology and basic techniques of confounder control and of assessing effect modification.

Content:

- Data description and presentation, graphical representations and summary measures
- Normal distribution
- Sampling distribution and confidence intervals
- Testing of statistical hypotheses (focusing on the comparison of mean values and proportions)
- Measures of association and agreement for categorical data
- Confounder control and assessment of effect modification / interactions
- Introduction to Linear Regression Models



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