

Title: Core course: Foundations of Statistical Modeling 1

Instructor: Thorsten Meiser

Abstract:

This course gives an advanced overview of standard multivariate methods and current developments in multivariate modeling. The topics include linear and generalized linear models, structural equation models, multilevel models, and their relations to other model families (e.g., item response models, latent growth curve models). The course provides the theoretical and formal basis of the multivariate models, empirical illustrations with real data and simulations, hands-on exercises with R, as well as some useful mathematical background from linear algebra, calculus and statistics. The goals are to bring the PhD candidates to a common level of statistical knowledge and data analytic skills, and to set the stage for the more specialized topics in the Foundations II course and workshops in the following semesters.

Assignment:

The instructor will provide preparatory video input and practice tasks.

Credits: 3 x 2 workshop days