Course schedule "Applied multivariate statistics"

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Date	Topic	Research context	Misc.
04.12.17	Introduction; Statistical modelling, simulation and the linear model	Data analysis cycle	
11.12.17	Multiple regression analysis: Modelling strategies and methods	Prediction, estimation and explanation of one response variable by a set of variables	
18.12.17	Generalized linear models		
08.01.18	Introduction to multivariate analysis; Ordination and Principal Component Analysis (PCA)	Explore main gradients of variation and reveal patterns of object similarity	Theor. Exam I
15.01.18	Multivariate multiple Regression (Redundancy Analysis – RDA)	Identify gradients of variation in a set of measured variables explained by another set of variables	
	Similarity and distance metrics; Non-metric multidimensional scaling (NMDS)	Explore main gradients of variation and reveal patterns of object similarity	
22.01.18	Multivariate comparison of groups (Hotelling T^2, MANOVA, PERMANOVA)	Estimate and test for differences in multiple variables or objects across groups	Theor. Exam II
29.01.18	Unsupervised classification (Cluster analysis)	Define groups of similar variables or objects	Pract. Exam
05.02.18	Supervised classification (Classification and regression trees), Open issues and exercises	Discriminate objects based on values of measured variables	Theor. Exam III
12.02.18	Exam missing parts (PC Raum 1 10-12:00)		