Schedule for

PsychR

- a course in statistics by using R

Date	Day	Subject	Estimated time	Content
May 20	Monday	Intro to R.	2-3 hours	Why use R? Introduction to R and the R programming language. Importing data into R. Dataset manipulation: Creating subset(s) of your data etc. Creating simple plots with main focus on the R package called ggplot2.

May 21	Tuesday	How to think when choosing test.	0.5 hours	How do I find a correct test for a given type of data?
				  - focusing on distribution of the response variable and type
				   of predictor variable(s) (repeated throughout the course).

		Intro to linear models (lm).	2 hours	Peforming t-tests, one-way ANOVA and linear regression, including models with a second order polynomial.
May 22	Wednesday	Multiple linear models.	2 hours	Performing two-way ANOVA and ANCOVA. What is an interaction? A short intro to model selection procedures.
May 23	Thursday	Linear mixed effect models (lme).	2 hours	What is linear mixed effects models? Performing lme for nested designs. Performing lme for repeated measurements designs.
May 24	Friday	Generalized linear models (glm).	2 hours	Why do we need glm? Performing analyses with glm. Problems with over- and under-dispersion. Quasimodels.
		A short intro to generalized linear mixed effects models (glmm).	0.5 hours	Why do we need glmm? Performing analyses with glmm.
		A short intro to Bayesian statistics.	0.5 hours	What is the principal difference between Bayesian and frequentist statistics? Performing Bayesian analyses on typical glmm data by using rstan and brms.

Note! Lectures start at 10:00 each morning at Department of Biological and Medical Psychology, BB-bygget, Jonas Lies vei 91, Room ??, ?? floor.
Call Karsten Specht at, +47 93605508, if you have trouble finding where we are.

Following each lecture, there will be a two hour computer lab where participants do practical exercises connected to the subject(s) the given day.
The lecturer will be in the computer lab to assist participants. You must bring your own laptop with R pre-installed.