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# **2021 LEARNVUL Summer School Schedule**

#### **Background information**

Video-lectures concerning Basics of R will be prepared and made available online before the start of the summer school. These will include: Using R-Studio, reading data, importing data, exporting data, examining data sets, transforming wide to long format or vice versa, examining variables, cleaning data, missing values, outliers, subsetting data, computing new variables (scales), labeling, reverse coding, collapsing variables in fewer categories, creating dummy variables, transforming variables, filter cases. These will exemplify using some basic descriptive statistics and contain also exercises with solutions.

#### Day 0 [Sunday, September 19 - welcoming event]

#### Day 1 (Monday, September 20)

Time	Topic / Activity
09.00 - 10.30	Introduction to data analysis and processing with R Part 3 (Part 1 and 2 will be made available <i>via</i> video lectures) with Q&A, additional data processing examples, and it will include simple examples for basic analyses (e.g., Pearson r, chi square, t student, basic visualization).
10.30 - 11.00	Coffee Break
11.00 - 12.30	Bayesian statistics and hypothesis testing. Conceptual issues and basics in R
12.30 - 14.30	Lunch Break
14.30 - 16.00	Bayesian statistics. Testing competing hypothesizes vs. null hypothesis. The level of support for the null hypothesis
16.00 - 16.30	Coffee Break
16.30 - 18.00	GLM 1. Simple ANOVA designs (between, within, mixed design, completely randomized, block design, visualization, with Bayesian equivalent)
19.00	Dinner

#### Day 2 (Tuesday, September 21)

Time	Topic / Activity
09.00 - 10.30	GLM 2. Generalizing ANOVA designs (ANCOVA, MANOVA, MANCOVA)
10.30 - 11.00	Coffee Break
11.00 - 12.30	Multilevel analysis for experimental data in R. Part 1
12.30 - 14.30	Lunch Break
14.30 - 16.00	Multilevel analysis for experimental data in R. Part 2
16.00 - 16.30	Coffee Break
16.30 - 18.00	Power analysis
19.00	Dinner











# Day 3 (Wednesday, September 22 - Parallel sessions in the morning, outdoor activities in the afternoon)

Time	Topic / Activity
09.00 - 10.30	Visualizing data with R
10.30 - 11.00	Coffee Break
11.00 - 13.00	Outdoor program
13.00	Lunch and outdoor afternoon program, plus dinner

## Day 4 (Thursday, September 23)

Time	Topic / Activity
09.00 - 10.30	Neuroticism and Emotional Vulnerability
10.30 - 11.00	Coffee Break
11.00 - 12.30	Evaluative Conditioning and Evaluative Learning
12.30 - 14.30	Lunch Break
14.30 - 16.00	Relating personality and learning (with a focus on Neuroticism)
16.00 - 16.30	Coffee Break
16.30 - 18.00	Round table based on the conceptual presentations
19.00	Dinner

### Day 5 (Friday, September 24)

Time	Topic / Activity
09.00 - 10.30	Data preprocessing from Inquisit and/or other data sources. From raw data to ready to analyze data (e.g., a standard evaluative conditioning study, linked with Inquisit).
10.30 - 11.00	Coffee Break
11.00 - 12.30	Best research practices in the Open Science and (post)reproducibility crisis era
12.30 - 14.00	Lunch Break
14.00 - 15.30	<b>Putting it all together I. A research project from A to Z</b> A basic outline of a research project from design, implementation, data collection, to manuscript submission. It covers: (i) standards for open science, reproducibility (preregistration of design, data availability and instruction, data management plan); (ii) other aspects than open science (working with supervisors, gathering data tools, presenting research announcements, informed consent form, dealing with GDPR, etc.). (30/35 minutes each team)
15.30 - 16.00	Coffee Break
16.00 - 18.00	Putting it all together II. Practical aspects learned from the teams (exercises and feedback) Exercises and feedback on the preparation of an outline of all steps for a research project of one's choice, from A to Z
18.00 - 19.00	<b>Final round-up</b> Final round of questions about anything raised during the summer school, reflections about the summer school, implications for future studies, etc.
19.00	Dinner





