# To Dos in advance

To participate in the workshop, you need to install base R and R Studio: <https://posit.co/download/rstudio-desktop/>

And prepare yourself:

* At best you should have a basic understanding regarding the following concepts statistical concepts: *Mean, variance, standard deviation and basic principles of hypothesis testing and multiple linear regression;*
* and have a basic understanding of R objects and classes (e.g. have a look at the following online course: <https://www.datacamp.com/courses/free-introduction-to-r>)
  + You can sign up for <https://education.github.com/pack> to get free access to datacamp and multiple other resources
* Additionally you can have a look at the recommended learning materials (start reading first section "Possible Learning Process"): <https://docs.google.com/document/d/1Z40Rkux_Ysq15VziCJJH21ca07ipwN52dA_LFYIsZ2g/edit?usp=sharing>

# Location + Register

Psychologie Hörsaal in Engelbergerstr. 41c, 79106 Freiburg

* Friday, the 10.05.; starting at 1pm (ct) till about 6pm
* Saturday, the 11.05.; starting at 9am (ct) to about 4pm

Please **register to my workshop** till the 8th of April by answering the google form: <https://forms.gle/DN1Z6HVxKg8XnhVG6>

# Table of Contents introductory workshop in R / R Studio [could slightly change!]

* Part 1:
  + Definition statistics, Statistician vs. Data Scientist
  + Motivating why to learn programming
* Part 2:
  + Presenting useful software for students & PhDs
  + Knowledge Management
* Part 3:
  1. Setting up a project
  2. Objects
  3. Data Structures
  4. Subsetting
  5. Flow Control
  6. Writing Functions
  7. File and Data Management
  8. Adding Packages + recommendations for central packages
* Part 4:
  + typical analyses sequences in action
    - *descriptive summary statistics (short)*
    - *hypothesis tests (in detail)*
    - *multiple linear regression (in more detail)*
  + Bibliometrix (*application of quantitative analysis and statistics to publications*)
* Part 5:
  + Presenting provided templates