



UNIVERSITY OF
HOHENHEIM

3-DAY INTRODUCTORY COURSE

Statistical Analyses with R/SAS

Teaching and Consulting Biostatistics Unit **340c**



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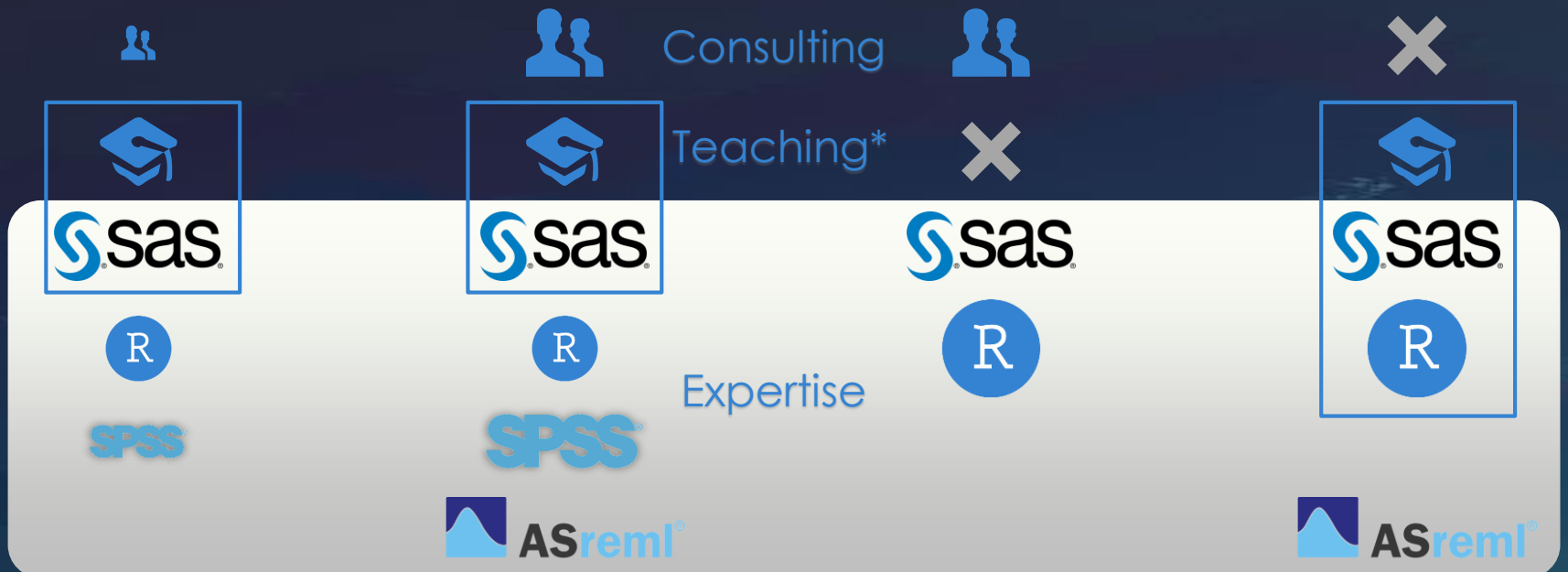
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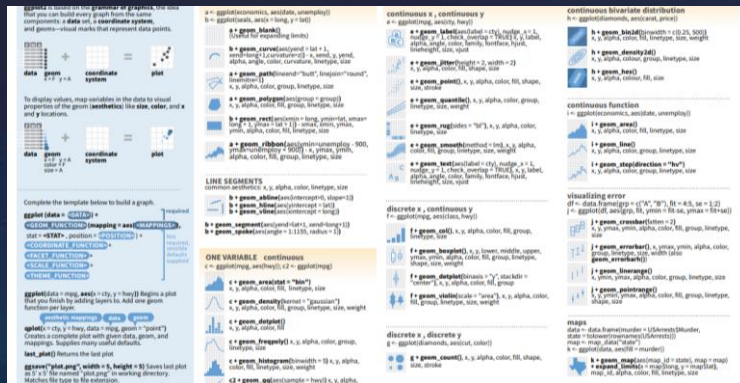




RECEIVE 1 ECTS AT THE END OF THIS COURSE

STEP 1 Create a folder on your computer and download all data files from github into it

STEP 2 Start Rstudio/SAS



Cheat Sheets

base R: <http://github.com/rstudio/cheatsheets/raw/master/base-r.pdf>

ggplot: <https://github.com/rstudio/cheatsheets/raw/master/data-visualization-2.1.pdf>

German: <https://www.rstudio.com/wp-content/uploads/2015/06/ggplot2-german.pdf>

Where do I even start learning more R?

Google specific Problem

How do I draw boxplots?

<http://imgfry.com/?q=R+boxplot>

How do I draw boxplots with ggplot?

<http://imgfry.com/?q=R+ggplot+boxplot>

The results are in! [See the 2018 Developer Survey results.](#)

Linear regression in R (normal and logarithmic data)

I want to carry out a linear regression in R for data in a normal and in a double logarithmic plot.

5 For normal data the dataset might be the following:

```
lin <- data.frame(x = c(0:6), y = c(0.3, 0.1, 0.9, 3.1, 5, 4.9, 6.2))
plot(lin$x, lin$y)
```

★ There I want to calculate draw a line for the linear regression only of the datapoints 2, 3 and 4.
3

For double logarithmic data the dataset might be the following:

```
data = data.frame(
  x=c(1:15),
  y=c(
    1.000, 0.742, 0.623, 0.550, 0.500, 0.462, 0.433,
```

Prof. Piepho's lectures

<https://www.uni-hohenheim.de/en/organization/person/prof-dr-hans-peter-piepho#lectures>

Where do I even start learning more SAS?

Official SAS documentation

When you google a specific problem (e.g. „linear regression SAS“) you will often find that the first google results are from the official SAS documentation. Try to look for the „examples“ section.

e.g.

https://support.sas.com/documentation/cdl/en/statug/63033/HTML/default/viewer.htm#statug_alm_sect045.htm

