

Required basic statistical knowledge for participation in the R user course

Data:

- Differentiation sample versus population
<https://www.youtube.com/watch?v=eIZD1BFfw8E>
<https://www.youtube.com/watch?v=Mb9BuEkbaHQ>
- Sampling and sampling bias
https://www.youtube.com/watch?v=z0Ry_3_qhDw
<https://www.youtube.com/watch?v=PdXDLNXPik>
- Normal Distribution
https://www.youtube.com/watch?v=mtbJbDwqWLE&ab_channel=SimpleLearningPro
- Scale levels nominal/categorical, ordinal, interval/metric, ratio
<https://www.youtube.com/watch?v=LuBD49SFpWs>
- Causality
<https://www.youtube.com/watch?v=ROpbdO-gRUo>
- Here you can find some colorful and quite simple explanations all kinds
<https://www.youtube.com/c/Simplelearningpro/videos>

Descriptive statistics:

- Measures of the central tendency (mean, modulus, median)
https://www.youtube.com/watch?v=kn83BA7cRNM&list=PL8dPuuaLjXtNM_Y-bUAhbISAdWRnmBUcr&index=4
- Variability (variance, standard deviation standard error)
https://www.youtube.com/watch?v=wDAd_QHkoOg
<https://www.youtube.com/watch?v=Cx2tGUze60s>
<https://www.youtube.com/watch?v=3UPYpOLeRjg>
- Covariance and correlation
<https://www.youtube.com/watch?v=xGbpufNR1ME>
<https://www.youtube.com/watch?v=4EXNedimDMs>
- Types of correlation
https://www.youtube.com/watch?v=Ypgo4qUBt5o&ab_channel=DrMaggard
- Linear regression
<https://www.youtube.com/watch?v=ZkjP5RJLQF4>
<https://www.youtube.com/watch?v=iAgYLRy7e20>
<https://www.youtube.com/watch?v=kHZBy1uVNnM>
https://www.youtube.com/watch?v=kHZBy1uVNnM&list=RDCMUCFrjdcImgcQVyFbK04MBEhA&start_radio=1&rv=kHZBy1uVNnM&t=367
- Logistic regression
<https://www.youtube.com/watch?v=yIYKR4sgzI8>

Inference statistics:

- Hypothesis, alpha and beta error probability
<https://www.youtube.com/watch?v=hYWQT5nt6DU>
<https://www.youtube.com/watch?v=CJvmp2gx7DQ>
- Alpha error accumulation
- Test-Power and effect size
https://www.youtube.com/watch?v=7mE-K_w1v90
<https://www.youtube.com/watch?v=9LVD9oLg1A0>
- The general linear model
https://www.youtube.com/watch?v=wfhD_ox4Srw
- Difference Linear Models vs. Generalized Linear Models
https://www.youtube.com/watch?v=ddCO2714W-o&ab_channel=MeerkatStatistics
- T-tests and ANOVA (regression revisited)
https://www.youtube.com/watch?v=pTmLQvMM-1M&ab_channel=BozemanScience
https://www.youtube.com/watch?v=nk2CQITm_eo
https://www.youtube.com/watch?v=NF5_btOaCig
- Differences between parametric and non-parametric methods
<https://www.youtube.com/watch?v=ftnOBcXtBEQ>
- Choosing a Statistical Test (Parametric vs Non parametric)
https://www.youtube.com/watch?v=ulk_JWckJ78&ab_channel=DanielM

Survival Analysis:

1. <https://www.youtube.com/watch?v=v1QqpG0rR1k&list=PLTNMv857s9WUclZLm6OFUW3QcXgRa97jx>
2. https://www.youtube.com/watch?v=K-_sblQZ5rE&list=PLTNMv857s9WUclZLm6OFUW3QcXgRa97jx&index=2
3. <https://www.youtube.com/watch?v=Dfe59glNXAQ&list=PLTNMv857s9WUclZLm6OFUW3QcXgRa97jx&index=3>
4. https://www.youtube.com/watch?v=lxoWsVco_iM&list=PLTNMv857s9WUclZLm6OFUW3QcXgRa97jx&index=4

Epidemiology:

1. <https://www.youtube.com/watch?v=Jd3gFT0-C4s>
2. https://www.youtube.com/watch?v=cTp_ONVVrh8