



Introduction to biological data analysis with R

More and more data is being generated in all branches of the life sciences. To take full advantage of these, basic knowledge in programming is an essential skill for future generations of scientists.

The course is designed for PhD students from the life sciences. Programming experience is not required.

The course consists of online lectures (slides with audio) and online classes. In the lectures both the theoretical background as well as basic knowledge for completing the exercises will be taught. Participants are expected to work on exercise sheets handed out on a weekly basis. Exercises will be presented and discussed in online classes.

Dates

The lecture begins on 15 April and approx. ends on 1 July. The online classes take place on Wednesdays (group I, from 21 April to approx. 7 July 2021) and Thursdays (group II, from 22 April to 8 July 2021) from 9:30 – 11:00 am.

How to do such a course during the corona pandemic

Lecture:

- I will publish slides with audio (background, explanations for this week's lessons)
- I will publish exercises

	Montag	Dienstag	Mittwoch	Donnerstag	Freitag	Samstag	Sonntag
1 st Week							
2 nd Week			Group I	Group II			

Classes:

- We will meet online via Zoom, 9:30 – 11:00 am
- We will discuss your solutions and any questions you have



Course content

- Basics in programming in R
- Tools for biological data analyses
- Data visualization
- Statistical analysis
- Exploratory data analysis
- Special topic: Single cell data

Goal

After successfully completing the course, participants will have the necessary theoretical background as well as practical experience to start analysing their own data.

Trainer

The Trainer, Prof. Florian Erhard, studied Bioinformatics at the Ludwig-Maximilians-University Munich and the Technical University Munich. After his doctorate and a postdoctoral position at the Teaching and Research Unit Bioinformatics, Institute for Informatics, Ludwig-Maximilians-University Munich, he moved to Würzburg. Since 2016 he holds a professorship for Systems Virology at the Institute for Virology and Immunobiology, University of Würzburg.