ViroiDoc Course Empowered for digital transformation training

This hybrid training in July and September 2026 is aimed for bioscience and biomedicine PhD students.

Participants will develop practical skills in R programming, Data Manipulation, and Linear Mixed Models (LMMs), with a focus on analysing complex and structured datasets. They will learn how to prepare data, apply linear and mixed-effects models, and confidently interpret results for real-world research applications. The training will be delivered in a hybrid format (online and in person), with a limited number of places available.

Presented by **Lan Gerdej** (Basic R & Data Manipulation) in **Rok Blagus** (Advanced R & Data Manipulation).

What: ViroiDoc Transferable skills training

Format: Hybrid

When in 2026:

- 6–7 July: Basic R & Data Manipulation
- 9–10 July: Advanced R & Data Manipulation
- 7–9 September: LMMs

The July training sessions will start at 10:00 CET (Time Zone Converter) and last for 4 hours.

Where:

- **Online:** Webex. Registered participants will receive a link to the event before the training begins.
- **In person:** Biotechnical Faculty UL– Department of Agronomy Classroom A3, Jamnikarjeva 101, Ljubljana, Slovenia, see map

Register HERE. NOTE: Registration is limited and will be accepted until all places have been filled, but no later than 19 June. Please register only if you intend to attend. If you cannot make it, please cancel as soon as possible to info@viroidoc.eu so someone else can take your place.

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This English-language training is free of charge for selected participants who have registered. It is part of the EU-funded ViroiDoc project. The training is organized by the University of Ljubljana, Faculty of Medicine in cooperation with Biotechnical Faculty.

More information: info@viroidoc.eu. *The organizer reserves the right to change the program.*

Session overview and who should attend?

This training programme equips bioscience PhD students with practical skills in R programming, Data Manipulation, and advanced statistical modelling. Participants will learn how to prepare and visualise data, and apply linear mixed models to analyse complex, hierarchical, and correlated datasets commonly encountered in research. Designed for varying levels of prior experience, the programme also introduces key model assumptions and extensions to generalized Linear Mixed Models (LMMs).

Presenters

Lan Gerdej, M.Sc. in Applied Statistics, is a researcher and assistant professor at the Faculty of Medicine, University of Ljubljana, where he specializes in biostatistics and biomedical informatics. His work focuses on the development and implementation of statistical methods, as well as modeling and simulations in the R programming environment. He collaborates on biomedical research projects by conducting data analyses and contributing to the preparation of scientific reports. In addition to his research work, he is actively involved in teaching at the faculty.

Dr. Rok Blagus, B.A. in Economics, is an Associate Professor at the Faculty of Medicine, University of Ljubljana, and at the Faculty of Mathematics, Natural Sciences, and Information Technologies, University of Primorska, where he works in the field of biostatistics. His research work focuses on the development of new methods, particularly for the analysis of correlated and high-dimensional data. He also teaches a range of statistics-related courses.

Learning objectives

R Programming and Data Manipulation (8 h): Students will enhance their proficiency in R programming and gain experience in integrating various R packages to analyse and visualize data effectively.

Linear Mixed Models (LMMs) (16 h): Students will gain proficiency in understanding, fitting, and interpreting linear mixed models. They will be able to model the effects of both fixed and random factors in data handling hierarchical and correlated data structures.

- **Data Manipulation for LMM in R** focuses on manipulating and preprocess data in R to prepare it for LMM analysis, including data cleaning, transformation, and structuring.
- With **Model Interpretation** students learn to interpret the results of LMMs, including fixed and random effects, variance components, and coefficients. They will understand how to make inferences from the models.
- **Model Assumptions** training covers the assumptions of LMMs, enabling students to assess the validity of the model and apply appropriate transformations or modifications when necessary. Extensions to generalized linear mixed models will also be covered.

Prepare before the lecture

No prior knowledge is required for the basic R course, but familiarity with basic R is required for the advanced course.

Online participants should install R and RStudio on their computers.

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