

Introduction to Statistical Software R and Electronic Data Capture Software REDCap

Day 1 - Wednesday, 23 November 2022 (online)

8:45 – 12:30	Defining the study database based on the protocol: <ul style="list-style-type: none"> – Defining the visit plan and case report forms (CRFs) – Writing the codebook for the database
12:30 – 13:30	<i>Lunch break</i>
13:30 – 16:45	Implementing the study database in REDCap: <ul style="list-style-type: none"> – Creating the CRFs – Creating the Events – Configuring optional modules – Testing of the database – User Management (Rights & Roles) – Deployment of the database Working with the database in REDCap: <ul style="list-style-type: none"> – Data Entry – Data monitoring – Data export

Day 2 - Thursday, 24 November 2022 (University of Bern)

9:00 – 12:30	Introduction to R & Rstudio, basic interface, scripts, environment. <ul style="list-style-type: none"> – Types of variables – Usual operators – Useful built-in functions – Programming functions – Installing packages from CRAN – Importing and exporting data Practical exercise
12:30 – 13:30	<i>Lunch break</i>
13:30 – 16:45	Packages, advanced data manipulations, programming and visualization <ul style="list-style-type: none"> – Filtering data – Descriptive statistics – Visualization using ggplot2 – Reporting analyses using R Markdown Practical exercise

Day 3 - Friday, 25 November 2022 (University of Bern)

9:00 – 12:30	Statistical analyses: <ul style="list-style-type: none">– Usual statistical tests– Linear models– Generalized linear models– Survival analyses: cox regression models, Kaplan-Meier curves Practical exercise
12:30 – 13:30	<i>Lunch break</i>
13:30 – 16:45	Mini Project: Undertaking and reporting data analysis