Vak: Programming 4 Elective R — credits: 5

Vakcode	BFVM24PROGRAM4R
Naam	Programming 4 Elective R
Studiejaar	2025-2026
ECTS credits	5
Taal	Engels
Coördinator	-

Werkvormen	Hoorcollege Opdracht Werkcollege
Toetsen	Programming 4 R - Opdracht

Leeruitkomsten

1. You demonstrate proficiency in utilizing the R programming language, showcasing mastery in handling data types, functions, and flow control elements.
2. You display the ability to identify, assess, and choose packages tailored to your workflow requirements. You preferentially make use of the tidyverse packages, or packages built on top of these.
3. You construct workflows for data cleaning, pre-processing, and exploration on multivariate tabular data, with a keen focus on the data's purpose, especially the outcome variable.
4. You create and implement scientifically accurate data visualizations using ggplot2 or related packages that extend its capabilities.
5. You utilize RMarkdown for generating comprehensive exploratory data analyses (EDAs), reports, and presentations.
6. You use the shiny library to develop interactive documents and independent reactive data dashboards or analysis applications.
7. You publish your R code in a documented package structure, employing devtools and roxygen, on a git-managed platform following GitHub standards (Readme, license, etc.).

Inhoud

Tailored for master's students in Data Science for Life Sciences, this elective course enhances proficiency in R programming, offering a robust foundation for applied data science tasks within the life science domain, emphasizing crucial skills for data exploration, analysis, and dissemination in professional settings, specifically in the omics fields. Key topics covered include the development of efficient workflows for data cleaning and exploration, utilizing tidyverse packages, and creating impactful data visualizations with ggplot2. Participants will also gain hands-on experience in using RMarkdown to generate customized reports. Furthermore, you will learn to deliver well-organized solutions through the development of a professional documented package structure.

Opgenomen in opleiding(en)

Master Data Sciences for the Life Science - 4 semesters

School(s)

Instituut voor Life Science & Technology

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