

**R Programming for Analytical Environmental Chemistry, 6.0  
credits**

R Programmering för analytisk miljö kemi, 6.0 hp

Third-cycle education course

6FIFM90

Department of Physics, Chemistry and Biology

Valid from: First half-year 2024

**Approved by**

**Approved**

**Registration number**

## Entry requirements

Environmental chemistry, analytical organic chemistry

## Learning outcomes

By the end of the course, the student should be able to:

- Understand the programming principles and data structures of the R language,
- Apply and write functions and R packages to analyze data from various sources,
- Use R to analyze and interpret data from environmental chemical analysis,
- Use R to generate appropriate visualization for chemical analysis data,
- Document the data analysis code and results in an appropriate format.

## Contents

The course is aimed for PhD students with knowledge of environmental chemistry and analytical chemistry. The R programming language will be applied to analyze environmental chemistry data as well as visualizing and reporting outputs.

## Grading

Two-grade scale

## Course literature

R for Data Science (2e). Hadley Wickham. Freely available at:

<https://r4ds.hadley.nz/>

R Graphics Cookbook, 2nd edition. Winston Chang. Freely available at: <https://r-graphics.org/>