



CORE FACILITIES AT SAHLGRENSKA ACADEMY

SC00035, R programming, 2 credits

R programmering, 2 högskolepoäng

Third-cycle level / Forskarnivå

Confirmation

This syllabus was confirmed by the Council for PhD Education at Sahlgrenska Academy on 2019-09-18, and was last revised on 2026-09-05. The revised course syllabus is valid from Spring semester 2027.

Responsible Department

Core Facilities at Sahlgrenska Academy, Sahlgrenska Academy

Entry requirements

Registered PhD students in Natural science or Medicine are qualified for the course.

Learning outcomes

After completing the course the student should be able to:

Knowledge and understanding

- Interpret simple R scripts
- Describe and summarize basic statistics used in data analysis

Competence and skills

- Use (fundamental) commands in R for importing, manipulating and summarizing data.
- Use (fundamental) commands in R for statistical tests, and plotting graphs and diagrams.
- Write R code as a script
- Use, debug and when needed modify existing R scripts
- Use help pages to understand commands and solve problems
- Install R packages from the most common sources and use these packages and the functions that they contain

Course content

The course covers:

- Introduction to R programming and scripting
- Data wrangling
- Introduction to statistical analysis in R
- Visualization in R

Types of instruction

The course includes a combination of lectures, practical sessions and home assignments

Language of instruction

The course is given in English

Grades

The grade Pass (G) or Fail (U) is given in this course.

To receive a passing grade, the student must complete all practical exercises with approved results.

Types of assessment

- Individual written hand-in assignment with written peer-response.

Any absence from these mandatory components means that the component will need to be made up at a later date. This shall take place as soon as possible, and no later than within two months, in consultation with the examining teacher.

If a PhD student, who has been failed on the same examining course component twice, requests a change of examiner before the next examination session, a request of this kind should be sent in writing to the department responsible for the course, and granted, unless there are special reasons to the contrary (Chapter 6, Section 22, Higher Education Ordinance).

Course evaluation

The course evaluation will be provided both as a written anonymous questionnaire (joint for Sahlgrenska Academy) and orally as a discussion between the students and the course leader(s). The course responsible teacher compiles analysis of the course evaluation and makes suggestions for further development of the course. The result and any changes in the set-up of the course shall be communicated both to the students that carried out the evaluation and to the students who are about to start the course.

Other information

Computer access with administration rights as well as internet access is required since all communication concerning the course and relevant documents, such as lectures, exercises and literature, will be posted at the virtual learning environment.