Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFG0059 Advanced R programming, 3.5 credits

Syllabus approved

2018-02-14

Subjects

Other Social Science

Education cycle

Third cycle

Grading scale

Pass / Failed
The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

Admitted to a postgraduate program, as well as a basic course in basic R programming (equivalent to the course Basic R programming (course code). The course is suitable for all graduate students.

Objective, including learning outcomes

This advanced course in R programming aims at giving in-depth knowledge in advanced R programming and to develop the student's skills in writing R functions

and efficient scripts for solving complex applications. The course focus on writing R functions, efficient data manipulation, and advanced plot.
Upon completion of the course the student will be able to:
- write advanced R functions,
- advanced data manipulation like reshape data, merge data,
- use advanced plot package, and
- perform data analysis on different topics.
The course offered a combination of lectures, computer exercises and self-study.

Content

The lectures provide an overview of the following topics:
- R functions in depth: parameters, return values, variable scope
- Debugging
- Extract data from function output
- Advanced data manipulation
- Advanced R graphics: ggplot2
- A group of useful packages

The lectures are followed by computer exercises where the students either work on material provided by the lecturer, or work on their own statistical material.

Requirements for examination

Approved computer assignments

Additional information

The student is expected to bring his/her own laptop for computer exercises.

The Department reserves the right to cancel the course if there are not more than 5 students who have applied for the course. There is no tuition fee. The students should bring their own laptops for computer exercises. The student is responsible for any housing and travel costs.
Students belonging to Statistics-related programs and the ECOS research school at the Forestry Faculty of SLU have priority to the course.
Please note that the course will run from February 8 to February 23, 2021. The course will have meetings from February 8-12, attendance to which is obligatory. Please note that in view of the COVID-19-related restrictions, the obligatory meetings may be run either as virtual only (via e.g. zoom) or with a virtual option

for participants who cannot or will not attend physical meetings.

Responsible department

Department of Forest Economics