

# **PFG0059, Advanced R programming, 3.5 Hp**

## **Syllabus**

Valid from: 2018V

### **Level within study regulation:**

Third cycle

### **Subject:**

- Other Social Science

### **Grading scale:**

Pass / Failed

### **Course language:**

Swedish

### **Entry requirements:**

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.

### **Objectives:**

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.

### **Modes of assessment:**

Approved computer assignments - If a student has failed an examination, the examiner has the right to issue supplementary assignments. This applies if it is possible and there are grounds to do so.

- The examiner can provide an adapted assessment to students entitled to study support for students with disabilities following a decision by the university. Examiners may

also issue an adapted examination or provide an alternative way for the students to take the exam.

- If this syllabus is withdrawn, SLU may introduce transitional provisions for examining students admitted based on this syllabus and who have not yet passed the course.
- For the assessment of an independent project (degree project), the examiner may also allow a student to add supplemental information after the deadline for submission. Read more in the Education Planning and Administration Handbook.

### **Organisation:**

Department of Forest Economics

## **Supplementary information**

### **Other information:**

- The right to participate in teaching and/or supervision only applies for the course instance the student was admitted to and registered on.
- If there are special reasons, students are entitled to participate in components with compulsory attendance when the course is given again. Read more in the Education Planning and Administration Handbook.