



SLUkurs

Syllabus

PFGoo6o Basic R programming, 4.0 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. The course is suitable for all graduate students. No programming experience is required, but students are recommended to possess knowledge in basic mathematical statistics.

Objective, including learning outcomes

The aim of the course is to provide basic knowledge of the R language and on the skills of writing R scripts for practical applications. The course will focus on the

core of R programming language, and data manipulation with R.

Upon completion of the course the student should be able to:

- master the basic knowledge of R language,
- master functions commonly used for data manipulation,
- generate basic descriptive statistics, conduct a simple multiple linear regression analysis and specification test, and
- produce different types of data plot.

The course consists of lectures, computer exercises and self-study.

Content

The course begins with an orientation connected to the following concepts:

- What is R and what can R do?
- An IDE (Integrated Development Environment) for R

Further, the course covers programming of R, specifically:

- Data types and data structures: vector, list, matrix, data frame, factor
- Import data and write out data
- Data manipulation
- Control flow
- Write simple function
- Plot
- Regression analysis

In computer exercise, students will write R scripts to solve specific problems by using the knowledge from the lecturers. Exercise materials are provided by the lecturer.

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 associated with Statistics-related programs and the ECOS research school at SLU have priority to the course.

Please note that the course will run from January 18 to February 4, 2021. The

course will meet from January 18-22, 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 attend physical meetings.

Responsible department

Department of Forest Economics