Department of Public Health Science

Stockholm University

Syllabus

for research course

Data analysis for the social sciences in R
Data-analys för samhällsvetenskap i R

3.0 Higher Education Credits
3.0 ECTS credits

Course code:	PH003F1
Valid from:	Autumn 2020
Department	Department of Public Health Sciences

Prerequisites and special admittance requirements

Learning outcomes

After having completed the course the students should be able to use R to:
-Import and characterize data
-Perform basic data-management tasks (creating new variables, merge different data sets, and aggregate data on different levels)
-Run regression models and interpret the outputs
-Visualize data relations, such as descriptive characteristics or model results.

Content

The course gives a broad introduction to the R software for statistical computing and graphics, adapted for social sciences. The aim of the course is to enable the participants to use R to perform data analysis in their research. The course is primarily intended for students in public health sciences but, conditioned on availability, the course is open for anyone.
The following content is included:
-Introduction to R, Rstudie and R Markdown
-Importing and exporting data
-Managing and transforming data
-Visualize data
-Generalized linear regression in R
-Simulate data
-Multilevel analysis and structural equation modeling in R
-Survival analysis in R

Mandatory exams

There will be in-class exercises to be completed, as well as a final project which will be presented to the class at the last session.

Forms of examination

a) The course is examined through a final project presentation.
The individual assignment and the home exam will be graded on a two-point grading scale (G=Pass, U=Fail).
The examination will be in English.
If the student has a certificate from Stockholm University which recommends special pedagogical support, the examiner has the right offer the student alternative forms of examination.

b) The course grade will be given on a two-point grading scale (G=Pass, U=Fail).
c) The grading criteria will be presented to the students in writing when the course begins.
d) In order to receive a passing grade in the course, the student must receive passing grades on the final project presentation.
e) Two examinations are offered each time the course is taught. For terms when the course is not taught, one examination is offered.

Students who receive a failing grade two consecutive times from the same examiner have the right to request a different examiner to grade the examination. This request should be made to the Director of Studies.

Form of instruction

The course consists of five teaching occasions and one examination. Each teaching occasion will contain a mix of teacher led lectures and hand-on work within the R/RStudie environment. During the practical work students will be presented with exercises which will illustrate and implement the topic for that session, as well as build on previous themes. The examination will consists of the participants presenting their own final data analysis project.
The course will be taught in English. See the course description for more detailed information. The course description will be available at least one month before the course starts.
The current course literature will be published on the department's website, www,su.se/publichealth, at least two months before the course begins.