**Statistics using R**

Universitetet i Agder

3-6 of September, 2018

COURSE CONTENT
PhD programme at the Faculty of Humanities and Education, specialization in linguistics.

Prerequisites
Students must have completed a Master´s degree in a relevant discipline.

Contents
The aim of this course is to provide students with basic knowledge of statistical analysis and a specific software package R. The course introduces students to using R statistical analyses in linguistics. The course will deal with all aspects of using this software - from getting your data into R Studio, perform different statistical analyses like chi-square, t-tests, correlation, regression, to graphing and plotting to understand and interpret data. The course will furthermore provide an introduction to mixed models and multiple regression. The first day of the course is intended as an introduction to statistical methods for students with little or no background in this area.

Day 1: 12-17.00 Introduction to statistical analysis
This first day is intended as additional preparation for those with little or no experience using statistical analysis.
Day 2: 9.30-17.00 Introduction to R
Getting your data into R Studio. Manipulating data (data wrangling). Data exploration and tidying.
Day 3: 9.30-17.00 Basic statistics in R Studio
This will be tailored to the kind of analyses that people are interested in e.g., chi-square, t-tests, correlation, regression. Graphing and plotting in R.

Day 4: 9.30-17.00 More advanced analyses
Graphing and plotting in R to understand your data. ANOVA in R / multiple regression / introduction to mixed models and/or Independent practice and assessment assignment

Teaching methods
This course will consist of lectures, discussions and hands-on practical work on data sets (see programme). The course is organized in sessions, each with a duration of one day. Since this is a basic course in statistics, the first session will be devoted to an introduction to R, whereas the two next sessions will deal with hands-on analyses with instruction tailored to the kind of analyses that the participating students are interested in, and graphing and plotting on a more advanced level.

Learning outcomes
After completing the course, the students will have basic knowledge of R as an integrated suite of software facilities for data manipulation, calculation and graphical display. Furthermore, the students will have acquired practical skills in using this tool for doing statistical analyses in linguistics, as the course is specifically targeted on hands-on experience in the use of this tool for specific purposes on the student´s own linguistic data sets.

Examination requirement
The course will award 5 ECTS for registrants who:
" Read the required literature prior to the course,
" Complete the required preparation (online courses, approx. 4-6 hours)
" Participate in all lectures and practical sessions
" Complete the assessed course assignment.

Assessment methods and criteria
Students will be assessed by their work on a set assignment on the final day of the course.

Offered as a free-standing course
Yes

Responsible faculty
Faculty of Humanities and Education
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