Seminar of Statistical Softwares

Objectives
The seminar introduces two important statistical softwares: R and SAS. In the end of this seminar, the students should be able to use these two softwares, to interpret and analyse an output.

Contents
1. An introduction in R
   • The uses of R, R objects, vectors, matrices, lists, data frames.
   • Looping, graphics, random numbers, functions.
   • R packages.
   • Simple examples of statistical analyses (simple regression, multiple regression, generalized linear models, anova).

2. An introduction in SAS
   • The uses of SAS, the SAS windows, and the SAS language.
   • Methods to input data into SAS, to create and modify SAS data sets.
   • Flow control statements, random numbers, specific procedures, macros.
   • Simple examples of statistical analyses (simple regression, multiple regression, generalized linear models, anova).

Evaluation
According curriculum 2010-2011 :
- CC : Continuous assessment - one practical assessment within-semester and an end-of-semester practical examination (2 hours).
- Reexamination session (September) : practical exam (2 hours).

Textbooks
Recommended books
For R:

For SAS:

Characteristics
- ECTS credits
- Compulsory course for master in statistics
- Autumn Semester
- Course + practical exercises on computer: 2 hours
- Prerequisite : no

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