Institute of Statistics

STAT2430A Statistical Computing: introduction

[6h+6h exercises] 2.5 credits

This course is taught in the 1st semester
Language: French
Level: Second cycle

Aims

Aims
At the end of this course, the students will have gain a critical view of the different classes of statistical software available on the market and basic culture on statistical algorithms and graphics. They will also be able to realise basic statistical analysis with different software (SAS, S-Plus, R, Excel, SPSS...) and write programs in the S and SAS programming languages.

Main themes

Content and teaching methods:
PART A : Methodology and case studies (2.5 C) (6h-6h)
- Steps of a statistical data analysis with a statistical software
- Classes of statistical software
- Statistical graphics: main classes of graphics and efficient use
- Systematic review of basic statistical tools though case studies using a "point and click" statistical software.

Content and teaching methods

Content and teaching methods:
PART A : Methodology and case studies (2.5 C) (6h-6h)
- Steps of a statistical data analysis with a statistical software
- Classes of statistical software
- Statistical graphics: main classes of graphics and efficient use
- Systematic review of basic statistical tools though case studies using a "point and click" statistical software.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites
Basic course in statistics and capability to work on a personnel computer.
Teaching materials
See web site : www.stat.ucl.ac.be/cours/stat2430
References :
W.S. Cleveland [1985] , The elements of graphing data,
F.C. Dilorio [1991] , SAS Application Programming, A Gentle Introduction, Duxbury Press.
Kennedy and Gentle [1980] , Statistical Computing, Marcel Dekker
Preud'home E. [1996] , SAS 6.10, Cours IUT II Grenoble.
Rubinstein [1981] , Simulation and the Monte Carlo Method, Wiley.
Seber G. et R. Wild [1989] , Non Linear Regression, Wiley.
S-Plus User's Manual, Statsci, Mathsoft Inc., Seattle.