

Faculty of Economic, Social and Political Sciences



SOC2136 Methods of quantitative analysis in sociology

[45h] 6 credits

This course is taught in the 1st and 2nd semester

Teacher(s): Bruno Schoumaker
Language: French
Level: Second cycle

Aims

By the end of the course, students will be able to:

carry out a critical analysis of articles and books by using a number of (mostly bivariate and multivariate) statistical methods and techniques;

~ process quantitative data (e.g. administrative files, and surveys) themselves by making use of the same methods and techniques.

Main themes

The course will provide a broad overview of the main statistical methods available, by structuring them in a unified presentation (e.g. methods of analysing dependences, inter-dependences and resemblances) with a view to providing students with the ability to make a reasoned choice of these methods of critically evaluating the uses made in scientific research and literature. Teaching will not focus solely on technical aspects of the statistical tools presented, and the teacher will ensure that they are re-situated in a methodological even a much broader, epistemological approach by stressing questions that are sometimes ignored, or referred to in insufficient detail in classical statistical handbooks (e.g. probabilistic sampling versus reasoned sampling, statistical error and errors in observation, the relevance of the closure clause in observation systems, and the debate on the reality of social causes).

Attention will be carefully drawn to the operationalisation aspect and the practical use of the methods and techniques by not according too much importance to the underlying formalism, and the students will have to become intelligent users of the tools presented, and not seasoned statisticians.

Content and teaching methods

1. Statistical and epistemological review:
 - problems of observation and experimentation;
 - real and false hazards;
 - probabilistic samples and reasoned samples (quotas);
 - describing, classifying and explaining: a typology of multivariate methods;
 - measurements of association and of correlation;
 - analysis of contingency tables;
 - the variance decomposition equation.
2. Descriptive or dimensional analysis: factorial methods.
3. Classificatory or typological analysis: methods of classifying and clustering.
4. Causal or 'explanatory' analysis: methods of multiple regression, variance covariance analysis, and analysis of causal dependence.
5. Integration of the various multivariate methods of analysis: multi level research plans, and contextual analysis.

