

Faculty of Psychology and Education Sciences



PSY2030

Mathematical models and methods in psychology

[30h] 3 credits

This course is not taught in 2006-2007

Teacher(s): Guy Lories
Language: French
Level: Second cycle

Aims

- to make the students able to express and to solve mathematically some problems specifically appearing in the practice of psychology and in research

Main themes

- use of mathematical models in human sciences in general, and more particularly in psychology
- introduction to modelization (creation and validation of the model)
- analysis of particular models and of their application (e.g. theory of signal detection, decision theory, Rasch models, dynamic models)

This course is different of other statistical courses because it implements some models which, on one hand are not necessarily stochastic, and on the other hand, are specifically linked to particular psychological problems or applications. Special emphasis will be put on a methodology differentiating the model creation, its validation and the implementation of statistical hypotheses.

Content and teaching methods

- to make the students able to express and to solve mathematically some problems specifically appearing in the practice of psychology and in research.
- modelization process
- theory of measure: spaces, dimensions, distances, measure scales
- simple mathematical models
- clustering
- decision theory
- detection theory
- multidimensional measures and scales

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

The content of the course could change each year