

## Faculty of Medicine



### IEPR1026 Statistics

[15h+15h exercises] 3 credits

This course is not taught in 2005-2006

Language: French

Level: First cycle

#### Aims

At the end of the course the successful student will be able to use the techniques of inferential statistics within the framework of his/her research. The course focuses on the most frequently used statistical methods. The underlying mathematical developments are limited to a strict minimum and replaced by intuitive reasoning and concrete examples, especially via practical exercise sessions.

#### Main themes

The course comprises theoretical lectures and exercise sessions:

1. Brief recall on one- and two-dimensional descriptive statistics
2. Inferential statistics: populations and samples, probabilities, variables, theoretical distributions, confidence intervals (means, variance, proportion), hypothesis testing based on sample means (Student t-test, analysis of variance, analysis of covariance, multiple comparisons), proportions (chi square, phi, contingency), correlations/regressions (significance, comparison, linearity), adjustment tests (chi square, KS), non-parametric tests (comparison of independent and dependent groups).
3. Application to capacity tests: classification of tests, quality of tests, validity and reproducibility.

#### Content and teaching methods

Will be completed by the titular professor when the courses will be attributed

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

Pre-requisite

Evaluation Written or oral examination, continuous evaluation

Support Syllabus or reference books

Supervision Titular professors

Others Exercise sessions + solutions to problems in groups of maximum 30 students