

Faculty of Medicine



IEPR2170 Statistics

[45h+15h exercises] 5.5 credits

Teacher(s): Taoufik Bouezmarni (supplée Philippe Lambert), Philippe Lambert, Annie Robert
Language: French
Level: Second cycle

Aims

The objectives are primarily to allow the students: 1. to include/understand the statistics most frequently met in other courses, written or verbal communications or at the time of scientific contacts; 2. to apply the statistical techniques to their own research. Accordingly, the course is centered on the training of the statistical methods most usual whose mathematical bases are reduced to essence and often replaced by intuitive reasoning or conclusive examples. It is necessary to underline the significant role of the meetings of exercises in the achievement of these objectives.

Main themes

This course includes/understands a lecturing in three parts as well as exercises. 1. Descriptive statistics with one and two dimensions: tableaux (with one or two entries, of association), graphs, parameters (central tendency, dispersion, dissymmetry, flatness, linear correlation, regressions and curvilinéaire). 2. Statistical inference: population and sample, probabilities, random variables, theoretical distributions, confidence intervals (average, variance, proportion), tests of assumptions referring to the averages (T of student, analyze variance, analyze covariance, comparisons individual), with the proportions (chi square, phi, C of contingency), with the corrélations/régressions (significance, comparison, linearity), with the goodness of fit tests (chi square, KS), some nonparametric tests (comparison of independent and dependent groups). 3. Application of the statistics to the method of the aptitude tests: classification of the tests, qualities of the tests, measures validity and fidelity. 4. Exercises as their solution are proposed with groups of +/- 30 students.

Content and teaching methods

1. to include/understand the statistics most frequently met in other courses
2. to apply the statistical techniques to their own research.
3. the significant role of the meetings of exercises in the achievement of these objectives.

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

Fifteen hours of practical exercises will be proposed to three or four groups of students (+- 30 students per group).

Programmes in which this activity is taught

SEX1EP Année de formation préparatoire à la licence en sciences de la famille et de la sexualité

Other credits in programs

KINE21 Première licence en kinésithérapie et réadaptation (5.5 credits) Mandatory