BIOL2150 Biometrics

[30h+30h exercises] 5 credits

This course is taught in the 2nd semester

Teacher(s): Eric Le Boulengé
Language: French
Level: Second cycle

Aims

Introduction to the use of statistical methods in the domains of biology. This course should allow memorantsXX students to analyse and interpret the quantitative results of their experimental work.

Main themes

- Initiation to planification of experimental research.
- Concept of statistical inference.
- Average, variance, t test and z test.
- Analysis of variance to 1 or 2 terms of classification, interactions, fixe model, varying model, mixt model and hierarchical model.
- Multiple comparaisons of averages.
- Analysis of discret data: chi-square test and proportion comparaison.
- Simple and multiple correlation.
- Simple, multiple and polynomial regression.
- Biological tests: dose-effect theories and probit analysis.
- Practical work illustrating the statistical methods and their applications to different orientations in the biology tought in masters and practiced in the laboratories. Application of statistical software available on micro-computers.

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

Prerequisites: elementary statistics.
Support: syllabus or reference book.

Other credits in programs

BIOL21/A	Première licence en sciences biologiques (Biologie moléculaire, cellulaire et humaine)	(5 credits)	Mandatory