Course for Ph.D. students
XLI Cycle (1 Nov 2025 – 31 Oct 2028)

Curriculum
PRODOTTI PER L'INDUSTRIA DELLA SALUTE E DEGLI ALIMENTI

Practical biostatistics (1ECTS)

Prof. Massimiliano Tognolini *(University of Parma)*

February 9, 2026 - 8:30 - 10:30
February 11, 2026 - 8:30 – 10:30
February 13, 2026 - 8:30 – 10:30

Course language: **English**

Course description

Practical lessons on biomedical data analysis and interpretation. The course will include a prominent amount of exercise by means of Excel and Prism – GraphPad.
The following topics are expected to be addressed
Descriptive statistics:

- distributions, measures of central tendency, measures of dispersion, skewness

Data representation:

- bar plot, whisker plot, scatter plot, low-to-high

Inferential statistics

- population and sample
- comparing a sample with a population, a sample with a sample: t-test, p significance, type I and type II error.
- comparing 2 or more groups: One-way ANOVA, Two-way ANOVA
- simple regression and correlation
- non-parametric statistics: χ^2 test

Good statistical practices in experimental design and their reporting
Practical course.
The course is limited to 15 students
Please register before January 30, 2026 by sending an e-mail to massimiliano.tognolini@unipr.it

Evaluation: YES (Written)