



University of Verona
Degree in Motor Activity and Sports Science
A.A. 2015-2016

*Integrated course
in statistics applied to motor
activity*

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Course objectives

The main objectives of the course are to provide essential knowledge of the discipline, to make students able to calculate and interpret the most common descriptive and inferential statistics used in the scientific literature.

Course program

- 1) Measurement: measurement scales and validity, precision and accuracy.
- 2) Statistical variables and frequency distributions.
- 3) Descriptive statistics (measures of position and variability, contingency tables).
- 4) Introduction to probability theory.
- 5) From sample to population: principles of statistical inference.
 - a. Confidence intervals;
 - b. hypothesis testing (t-test for comparing two means, t-test for paired data, test for comparing proportions).
- 6) The Chi-Squared distribution and the analysis of frequencies.
- 7) Correlation and simple linear regression; interpretation of multiple regression analysis.
- 8) ANOVA: the analysis of variance.

Exam modalities

The exam consists of a written exam followed by an optional oral exam. The written exam contains multiple choice questions and open answer exercises. Oral exam deals mainly with the written exam answers.

Recommended readings

- 📖 Fowler J, Jarvis P, Chevannes M (2006) Statistica per le professioni sanitarie. EdiSES: Napoli.
- 📖 Triola MM, Triola MF (2009) Statistica per le discipline biosanitarie. Ed. Pearson.
- 📖 Mecatti F (2015) Statistica di base, II edizione. Ed. McGrawHill, Milano.
- 📖 Verlato G, Zanolin ME (2000) Esercizi di Statistica Medica, Informatica ed Epidemiologia. Editrice Libreria Cortina: Verona.
- 📖 Villani S, Borrelli P.(2013) Excel & Statistica Medica. Ed. Medea s.r.l. Pavia