FEDERAL UNIVERSITY OF SÃO CARLOS FOUNDATION

GRADUATE PROGRAM IN PHYSIOTHERAPY – PPGFt/CCBS/R

COURSE CHARACTERIZATION FORM

Graduate Program: Physiotherapy

Course Code: FIT-218

Credits: 6

Course Title: Fundamentals of Biostatistics

Start of Validity: 2026 – 1st Semester

Justification

This course was created as a basic training discipline addressing fundamental aspects of biostatistics, aimed at providing general statistical training for graduate students.

Course Workload

Theoretical Classes: 40 hours

Practical Classes: 25 hours

Exercises/Seminars: 25 hours

Course Syllabus

• Identification of different types of variables and data in health studies

• Understanding basic principles of sampling and experimental design

• Application of descriptive statistics to summarize and present data

• Fundamental concepts of probability and statistical distributions

• Parameter estimation and construction of confidence intervals

• Formulation and testing of statistical hypotheses for different data types and research questions

• Use and interpretation of parametric and non-parametric tests

• Application of simple and multiple linear regression models to investigate relationships between variables

• Application of analysis of variance (ANOVA) tests

• Use of Jamovi statistical software for data analysis

• Critical interpretation of results from basic statistical analyses in scientific articles

• Clear and accurate communication of basic statistical methods and results in reports and publications

Nature of the Course

Specific to the Area of Concentration in Physiotherapy and Functional Performance.

Main Bibliography

Callegari-Jacques SM. Biostatistics: Principles and Applications. Artmed, 2003.

Carter RE, Lubinsky J, Domholdt E. Rehabilitation Research: Principles and Applications. 4th ed. Elsevier, 2001.

Field A. Discovering Statistics Using SPSS. 3rd ed. Sage, 2009.

Portney LG, Watkins MP. Foundations of Clinical Research: Applications to Practice. 3rd ed. Prentice Hall, 2009.

Thomas JR, Nelson JK, Silverman SJ. Research Methods in Physical Activity. 5th ed. Artmed, 2007.

Vincent WJ, Weir JP. Statistics in Kinesiology. 4th ed. Human Kinetics, 2012.

Main Responsible Faculty

Patricia Driusso – Permanent Faculty

Tatiana de Oliveira Sato – Permanent Faculty

Approval

Approved at the 299th Ordinary Meeting of the PPGFT Graduate Program Committee on December 4, 2025.

São Carlos, December 4, 2025.

Prof. Dr. Anielle Cristhine de Medeiros Takahashi

Chair of the PPGFT Graduate Program Committee – UFSCar