UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Statistica Descrittiva A

2627-4-H4101D261-H4101D186M

Aims

This course aims to provide the basic tools of medical statistics that are at the basis of a proper methodological approach to a research project in medicine. The student will be able to calculate the main descriptive indexes and to appreciate the characteristics of a sample by descriptive statistics and plots.

By the end of the course, students should be familiar with the fundamental concepts of descriptive statistics (measures of central tendency and variability)

Contents

Uncertainty in medicine. Methods for data description.

Detailed program

DESCRIPTIVE STATISTICS FOR BIOLOGICAL VARIATION: Statistical unit, target population, sample, variables and data. Types of variables. Summary indicators (central tendency and dispersion). DATA COLLECTION AND PRESENTATION OF DATA: Methods for collecting and coding data; quality control; Data-bases for statistical analysis; Presentation of data in graphs and tables. ERROR IN THE MEASURE OF BIOLOGICAL PHENOMENA: Reliability evaluation of measurement methods; Random error and measurement accuracy; Systematic error and accuracy of the measure.

Prerequisites

specific preliminary knowldge is not required

Teaching form

Lectures will be interspersed with practical exercise.
Critical reading of clinical papers.

- 4 2-hour lectures conducted in in-presence delivery mode in the initial part that is aimed at engaging students interactively in the later part.
- 2 lessons of 2 hours conducted delivered remotely (asynchronously) with individual exercises supervised by the instructor.

Textbook and teaching resource

Marc M. Triola, Mario F. Triola, Jason Roy. Fondamenti di statistica Per le discipline biomediche 2nd Edition, published by Pearson Education 2022.

Martin Bland. An Introduction to Medical Statistics, Oxford 2015

Stanton A.Glantz. Primer of Biostatistics, McGraw-Hill Education / Medical 2011

Martin Bland. An Introduction to Medical Statistics, Oxford 2015

Bossi Anna, Cortinovis Ivan Statistica medica : esercitazioni Milano [poi] Torino : CittaStudi edizioni, 1996. ISBN 88-251-7163-3

Semester

First semester

Assessment method

Final written test including:

-3/4 exercises to test the ability of the student in the application of statistics

-4/5 questions with closed answer to evaluate the preparation on the overall program

-1 test on an extract of a clinical paper to evaluate the interpretation of basic statistics in medical literature

Office hours

Tuesday 10-12 am on appointment.
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Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY