UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Statistica Medica

2425-1-K0101D002-K0101D003M

Aims

Descriptive and inferential statistics in applications in obstetrics and nursing science

Contents

Statistical units, sample, population, variables and data, construction of tables and graphs. Descriptive statistics: indices of location and dispersion. Probability: union and intersection, discrete and continuous random variables, the Binomial and the Normal distribution. The process of inference: point estimation and sampling distributions; interval estimation and confidence intervals; the test of hypothesis.

Detailed program

Introduction to Statistics: types of variables; construction of tables and graphs (for one or more variables). Descriptive Statistics: indices of location (mean, median, mode, percentiles); indices of dispersion (deviance, variance, standard deviation, coefficient of variation); random and systematic errors as related to any measurement process: indices of precision and accuracy; correlation and simple linear regression. Probability: definitions of probability; conditional probability and independence; probability of the union and intersection of events; examples of applications in the clinical context (sensitivity, specificity and predictive values of a diagnostic test); the Binomial distribution; the Normal distribution. Inference: sample and population; sample estimates and population parameters; sampling distributions of estimators (distribution of the sample mean); confidence interval.

Prerequisites

None

Teaching form

Lectures in presence

Textbook and teaching resource

STATISTICA MEDICA E STATISTICA PER LA RICERCA SPERIMENTALE E TECNOLOGICA -
Bland M. (2019) Statistica Medica, Apogeo;
Pagano M., Gauvreau M. (2003) Biostatistica, Idelson-Gnocchi;
Bossi A., Cortinovis I. (1996) Statistica medica. Esercitazioni, Città Studi Edizione.

Semester

First semester

Assessment method

Written exam with exercises, tests and open questions

Office hours

On demand

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | DECENT WORK AND ECONOMIC GROWTH