



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Psicometria con Laboratorio Software 2 - 2

2223-2-E2401P132-T2

Learning area

KNOWLEDGE ABOUT QUALITATIVE AND QUANTITATIVE RESEARCH METHODOLOGY

Learning objectives

Knowledge and understanding

- Statistics for correlation data
- Statistics for experimental data
- Simple and complex relationships among different types of variables
- Basics of measurement in psychology

Applying knowledge and understanding

- Ability to analyze data collected in different research designs
- Understanding and evaluating third-party statistics and their quality
- Estimating and understanding simple relationships among variables.
- Employing and evaluating different types of psychological measures
- Use of SPSS software and freeware

Contents

An overview of several statistical techniques and methodological concepts is provided, giving the student the ability to collect and analyze data in a wide range of research situations. Univariate statistical techniques are presented, with emphasis on the interpretation of results. Fundamental concepts related with measurement in psychology are also discussed.

Detailed program

Correlations, simple, partial and ordinal
The chi square test as an example of comparing measures
Regression, simple and multiple
Significance of parameters
Residuals in regression
Theory of measurement
Reliability and validity of psychological measures
The self-calibrating scores as an alternative to Likert scales
Classical factor analysis
Categorical factor analysis
Using SPSS

Prerequisites

Basic knowledge presented in *Elementi di Psicometria* (probability theories, Random variables, basics about hypothesis verification)

Teaching methods

lectures and hands-on teaching with a computer

Assessment methods

written examination with multiple choice questions and short open ended questions

Textbooks and Reading Materials

teacher's handout

Sustainable Development Goals
